Haier SERVICE MANUAL

LED TV

Model No. LEY22T1000HF

MSD308 Chassis

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Chapter 1: General Information

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1-2. General Guidelines

When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.

After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.

After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.
1) Leakage Current Cold Check
2) Leakage Current Hot Check
3) Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive

1-3. Important Notice

1-3-1. Follow the regulations and warnings

Most important thing is to list up the potential hazard or risk for the service personnel to open the units and disassemble the units. For example, we need to describe properly how to avoid the possibility to get electrical shock from the live power supply or charged electrical parts (even the power is off).

This symbol indicates that high voltage is present inside.It is dangerous to make any king of contact with any inside part of this product.

This symbol indicates that there are important operating and maintenance instructions in the literture accompanying the appliance.

1-3-2. Be careful to the electrical shock

To prevent damage which might result in electric shock or fire, do not expose this TV set to rain or excessive moisture. This TV must not be exposed to dripping or splashing water, and objects filled with liquid, such as vases, must not be placed on top of or above the TV.

1-3-3. Electro static discharge (ESD)

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. The following techniques should be used to help reduce the incidence of component damage caused by electros static discharge (ESD).

1-3-4. About lead free solder (PbF)

This product is manufactured using lead-free solder as a part of a movement within the consumer products industry at large to be environmentally responsible. Lead-free solder must be used in the servicing and repairing of this product.

1-3-5. Use the genewing parts (specified parts)

Special parts which have purposes of fire retardant (resistors), high-quality sound (capacitors), low noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

Safety Component

● Components identified by mark have special characteristics important for safety.

1-3-6 Safety Check after Repairment

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the positions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

General Servicing Precautions

1. Always unplug the receiver AC power cord from the AC power source before;
   a. Removing or reinstalling any component, circuit board module or any other receiver assembly.
   b. Disconnecting or reconnecting any receiver electrical plug or other electrical connection.
   c. Connecting a test substitute in parallel with an electrolytic capacitor in the receiver.

CAUTION: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc) equipped with a suitable high voltage probe.

Do not test high voltage by "drawing an arc".

3. Do not spray chemicals on or near this receiver or any of its assemblies.

4. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable non-abrasive applicator; 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength).

CAUTION: This is a flammable mixture.
Unless specified otherwise in this service manual, lubrication of contacts is not required.
Capacitors may result in an explosion hazard.

5. Do not defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.

6. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.

7. Always connect the test receiver ground lead to the receiver chassis ground before connecting the test receiver positive lead.

Always remove the test receiver ground lead last. Capacitors may result in an explosion hazard.

8. Use with this receiver only the test fixtures specified in this service manual.

CAUTION: Do not connect the test fixture ground strap to any heat sink in this receiver.

9. Remove the antenna terminal on TV and turn on the TV.

10. Insulation resistance between the cord plug terminals and the eternal exposure metal should be more than Mohm by using the 500V insulation resistance meter.

11. If the insulation resistance is less than M ohm, the inspection repair should be required. If you have not the 500V insulation resistance meter, use a Tester. External exposure metal: Antenna terminal Headphone jack

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid-state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the ncidence of component damage caused by static by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed to prevent potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.

4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it.
(Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

1-3-7. Ordering Spare Parts

Please include the following informations when you order parts. (Particularly the Version letter)

1. Model number, Serial number and Software Version
The model number and Serial number can be found on the back of each product and the Software Version can be found at the Spare Parts List.

2. Spare Part No. and Description
You can find them in the Spare Parts List

1-3-8. Photo used in this manual

The illustration and photos used in this Manual may not base on the final design of products, which may differ from your products in some way.

1-4. How to Read this Service Manual

Using Icons:
Icons are used to attract the attention of the reader to specific information. The meaning of each icon is described in the table below:

Note:
A “note” provides information that is not indispensable, but may nevertheless be valuable to the reader, such as tips and tricks.

Caution:
A “caution” is used when there is danger that the reader, through incorrect manipulation, may damage equipment, loose data, get an unexpected result or has to restart(part of) a procedure.

Warning:
A “warning” is used when there is danger of personal injury.

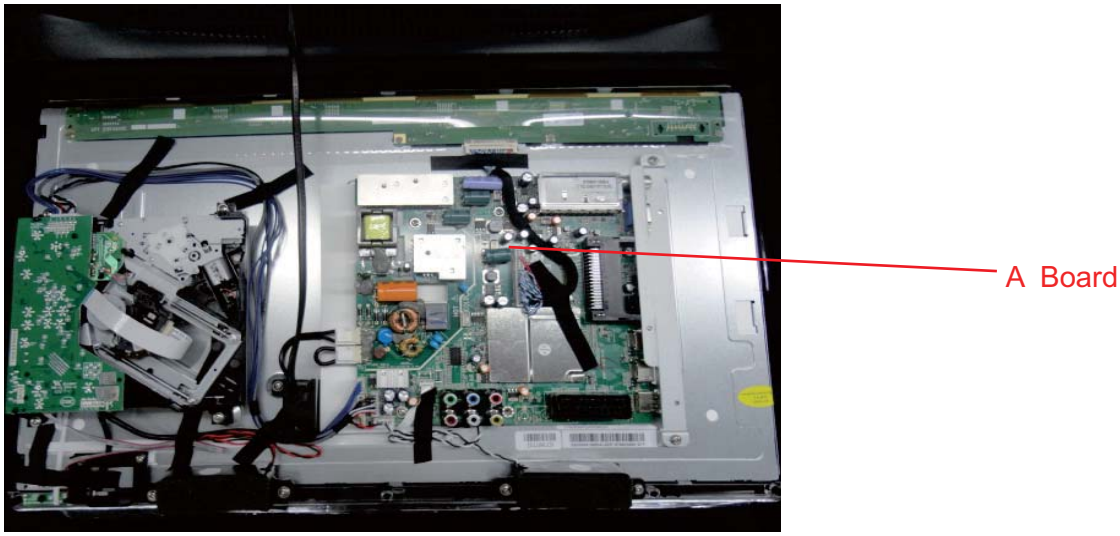
Reference:
A “reference” guides the reader to other places in this binder or in this manual, where he/she will find additional information on a specific topic.

2. Specifications

Model	**LEY22T1000HF**
Screen Size	21.5 inch
Aspect Ratio	16:9
Resolution	1920*1080
Response Time (ms)	5.0 (GRAY TO GRAY)
Angel of View	176o
Color Display	16.7M
No. of Preset Channels	1000
OSD Language	English
Color System	PAL/SECAM
Audio System	DK, BG, I, M, L, L'
Audio Output Power (Built-in) (W)	3W×2
Audio Output Power (outer) (W)	No
Total Power Input (W)	38W
Voltage Range (V)	AC 100-240V
Power Frequency (Hz)	50~60Hz
Net Weight (KG)	3.35
Gross Weight (KG)	3.8
Net Dimension (MM)	518.5*322*50
Packaged Dimension (MM)	518.5*363*160

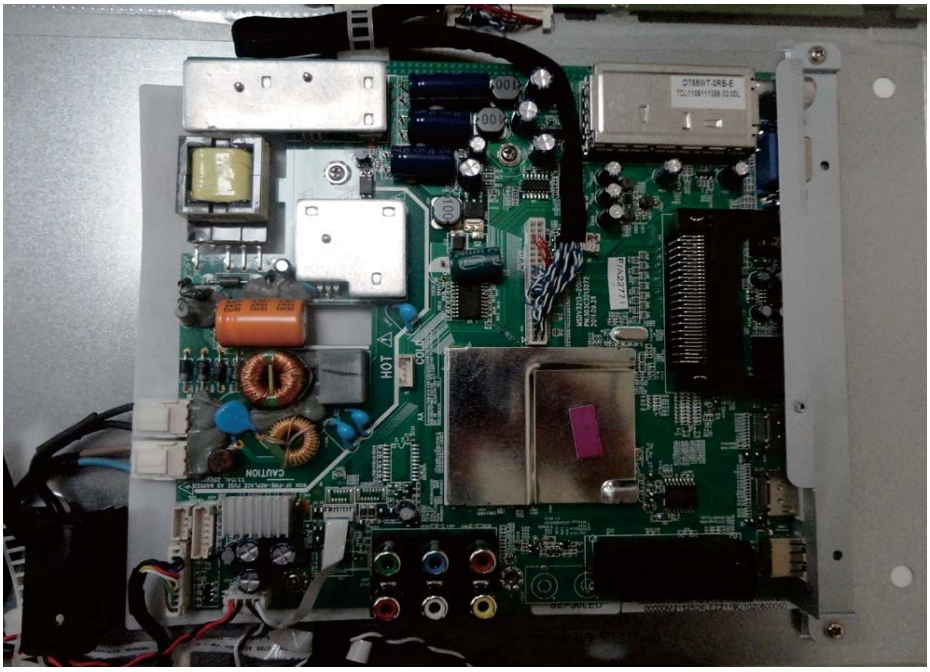
3. Location of Controls and Components

3-1 Board Location



No.	Description	
A Board	Integration Mainboard	DH1Q00M0600M

3-2 Main Board



3-2-1 Function Description:

Main Board

Process signal which incept from exterior equipment then translate into signal that panel can display.

3-2-2 Connector definition

Main board connector

Keypad andremote connector (CN8)

Pin number	Signal name	Description
1	LED_R	LAMP RED
2	LED_G	LAMP GREEN
3	STANDBY	
4	IR	REMOTE CONTROL
5	GND	GND
6	5V	POWER FOR REMOTE
7	NC	
8	KEY0	
9	KEY1	
10	GND	

Speaker connector (CN30)

Pin number	Signal name	Description
1	RSPK+	RSPK+
2	RSPK-	RSPK-
3	LSPK-	LSPK-
4	LSPK+	LSPK+

3-3. LED Panel

MTC215LED-P07H(CLAB215FA04 V4)

3-4-1.Connector de finition

PIN NO.	REMARK	FUNCTION
1	RXO0-	minus signal of odd channel 0(LVDS)
2	RXO0+	plus signal of odd channel 0(LVDS)
3	RXO1-	minus signal of odd channel 1(LVDS)
4	RXO1+	plus signal of odd channel 1(LVDS)
5	RXO2-	minus signal of odd channel 2(LVDS)
6	RXO2+	plus signal of odd channel 2(LVDS)
7	GND	GND
8	RXOC-	minus signal of odd clock channel (LVDS)
9	RXOC+	plus signal of odd clock channel (LVDS)
10	RXO3-	minus signal of odd channel 3(LVDS)
11	RXO3+	plus signal of odd channel 3(LVDS)
12	RXE0-	minus signal of even channel 0(LVDS)
13	RXE0+	plus signal of even channel 0(LVDS)
14	GND	GND
15	RXE1-	minus signal of even channel 1(LVDS)
16	RXE1+	plus signal of even channel 1(LVDS)
17	GND	GND
18	RXE2-	minus signal of even channel 2(LVDS)
19	RXE2+	plus signal of even channel 2(LVDS)
20	RXEC-	minus signal of even clock channel (LVDS)
21	RXEC+	plus signal of even clock channel (LVDS)
22	RXE3-	minus signal of even channel 3(LVDS)
23	RXE3+	plus signal of even channel 3(LVDS)
24	GND	GND
25	NC	NC
26	NC	Test pin (Can’t connect to GND)
27	NC	NC
28	VCC	Power supply input voltage(5.0 V)
29	VCC	Power supply input voltage(5.0 V)
30	VCC	Power supply input voltage(5.0 V)

1) Keep the NC Pin and don’t connect it to GND or other signals.

2) GND Pin must connect to the ground, don’t let it be a vacant pin.

4. Disassemble and assemble

4-1 Remove the Pedestal

 Lay down the unit so that rear cover faces upward

 Remove the three screw from the rear cover indicated with ○

 Then remove the pedestal

4-2Remove the Back Cover

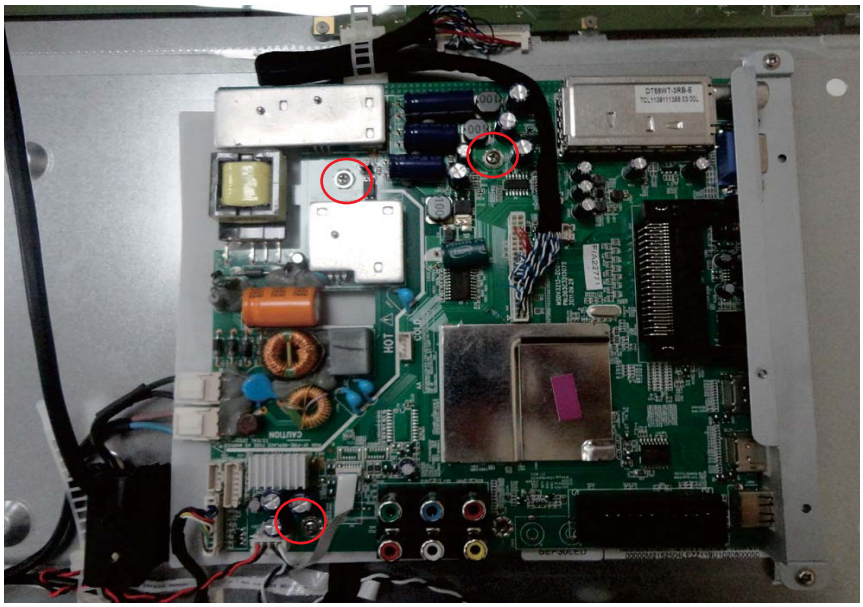
 Remove the these screw indicated on figure above by ○

 Then remove the back cover from the unit.

4-3. Remove the adhesive tape

Remove the adhesive tape indicated on the figure above

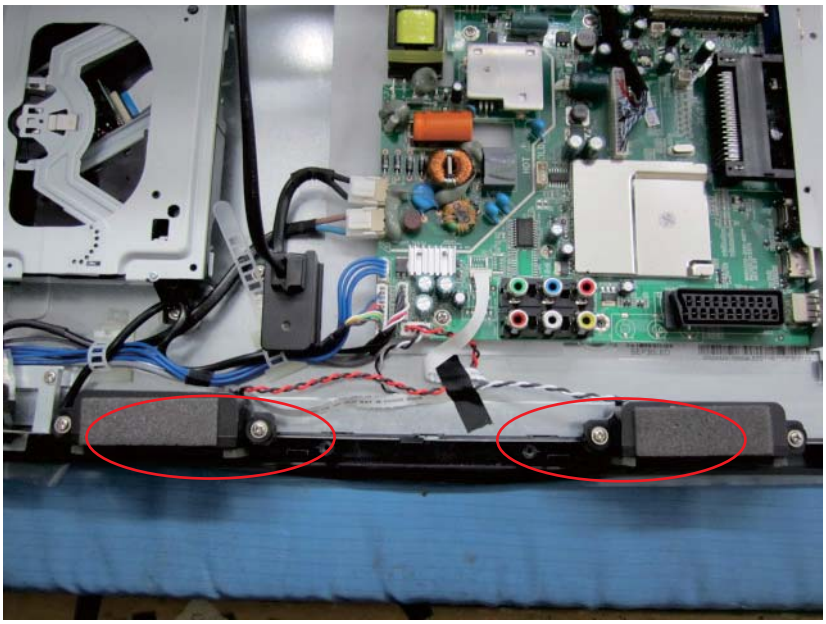
4-4 Remove the Main board



□ Disconnected the coupler CN5 CN8 CN30 CN804 CN800 CN805 CN18 CN19

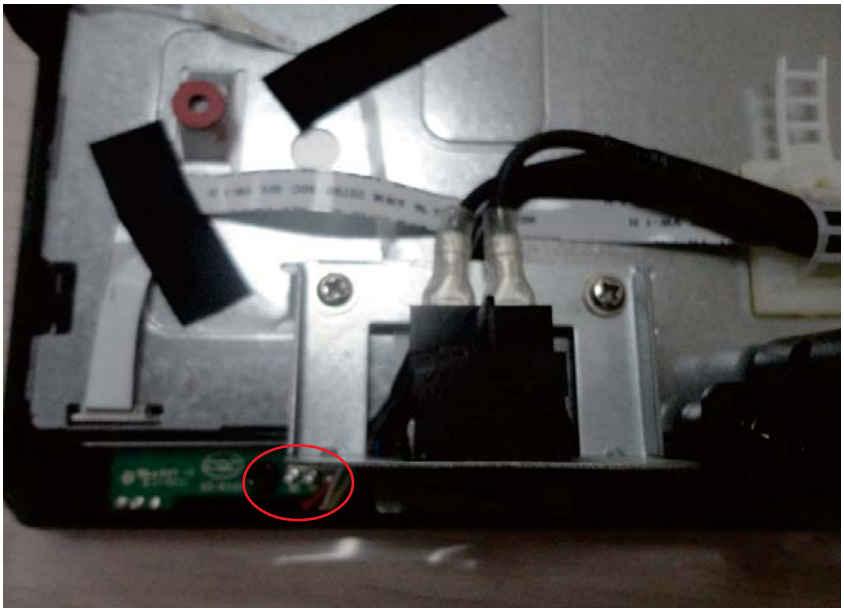
□ Remove the Main board

4-5 Remove the speaker



Take out the speaker

4-6 Remove the remote control



take out the remote control board

5. Installation Instructions

5-1 External Equipment Connections

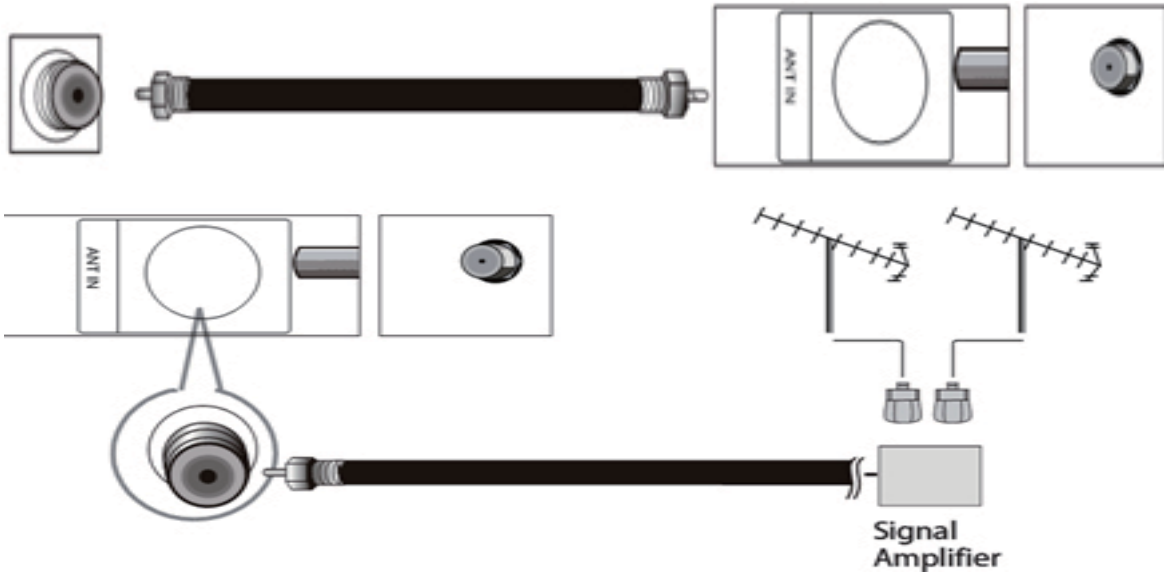
Accessories

Remote Control

User GUIDE

Battery

Antenna Connection
Connect one end of a coaxial cable (not included) to the ANT IN jack on the back of your TV/DVD combo, then connect the other end of the cable into the antenna or cable TV wall outlet.

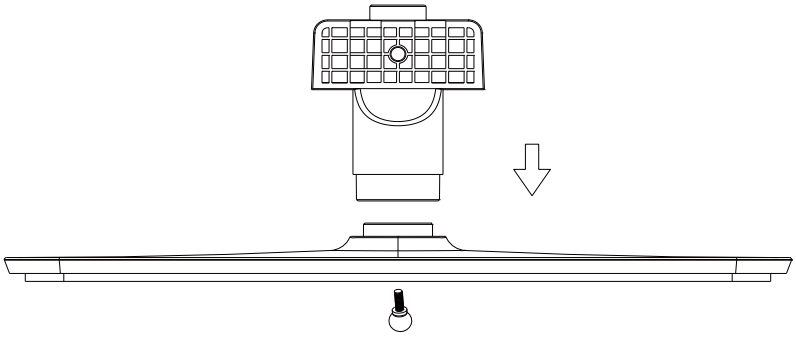


To improve picture quality from an antenna in a poor signal area, install a signal amplifier.
If you need to split the antenna signal to connect two TVs, install a two-way splitter.

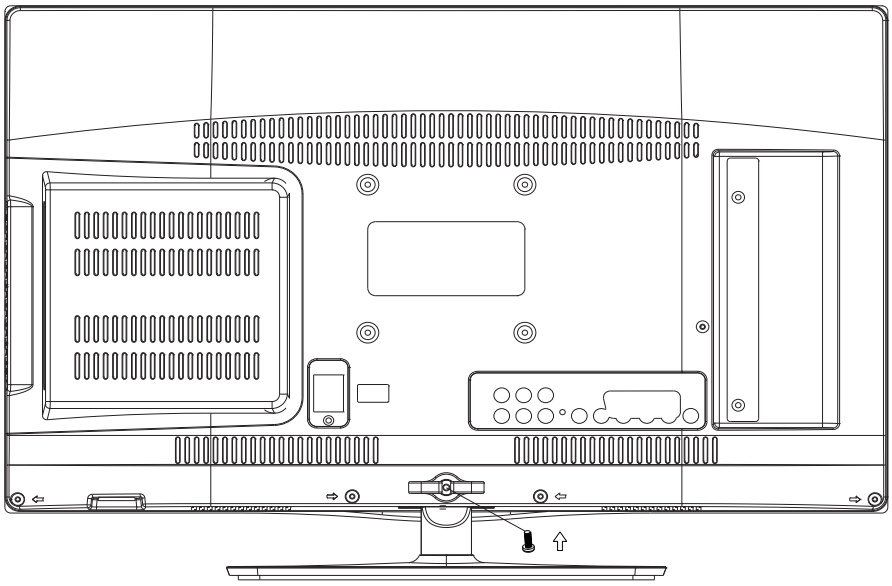
Base Stand Assembly Instruction

19"/22"/24"

1. Insert the stand support pillar into the stand as the arrow indicated direction, and then fastened with one screw.



2. Insert the stand Ass'y into back cover as the arrow indicated direction, and then fastened with one screw.



INSTALLATION NOTES

Locate the TV in a room where light does not strike the screen directly. Total darkness or a reflection on the screen can cause eyestrain. Soft and indirect lighting is recommended for comfortable viewing.

Allow enough space between the TV and the wall to permit ventilation.

Please don't rotate the TV!

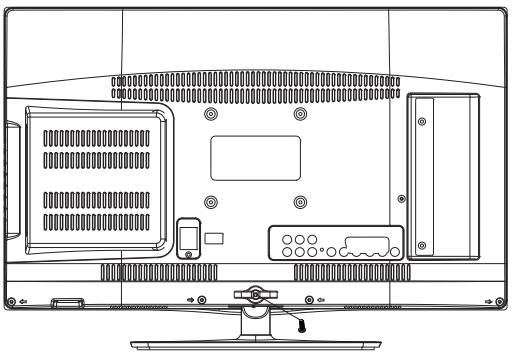
Avoid excessively warm locations to prevent possible damage to the cabinet or premature component failure.

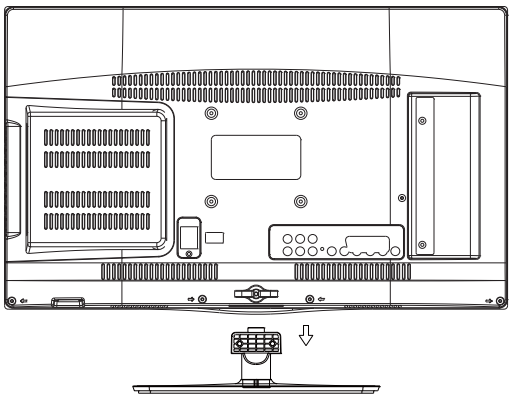
WALL MOUNTING INSTALLATION GUIDELINES

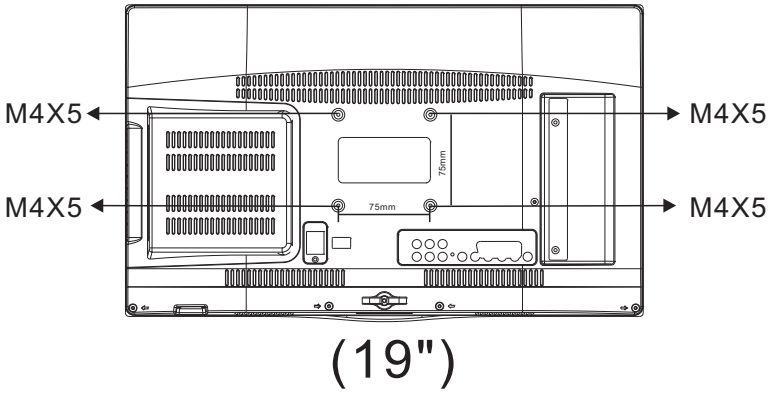
This television can be wall mounted as follows:

1.Place the LED LCD Television onto a solid surface. Please place some soft material over the front of the screen to protect it from any damage.

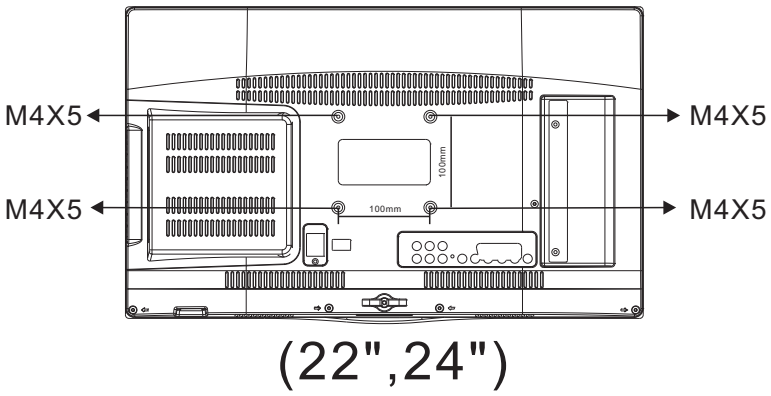
2.Remove the screws from the lower part of the television, where the base joins to the TV, and take away the stand (put the stand somewhere safe for future use).







(19")



(22",24")

5-2 HDMI Connections

When the source device(DVD player or Set Top Box) supports HDM
How To Connect

1. Connect the source device to HDMI port of this TV with an HDMI cable(not supplied with this product).
2. No separated audio connection is necessary.

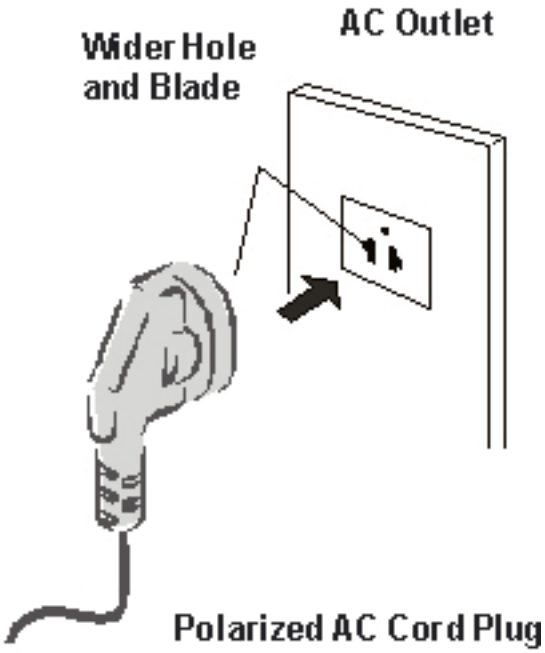
How To Use
If the source device supports Auto HDMI function, the output resolution of the source device will be automatically
set to 1280x720p.
If the source device does not support Auto HDMI, you need to set the output resolution appropriately.
To get the best picture quality, adjust the output resolution of the source device to 1280x720p.
Select HDMI input source in input source option of Select Main source menu.

When the source device(DVD player or Set Top Box) supports DVI
How To Connect
1. Connect the source device to HDMI port of this TV with a HDMI-to-DVI cable(not supplied with this product).
2. A separated audio connection is necessary.
3. If the source device has an analog audio output connector, connect the source device audio output to DVI Audio In port located on the PC port.

How To Use
If the source device supports Auto DVI function, the output resolution of the source device will be automatically
set to 1280x720p.
If the source device does not support Auto DVI, you need to set the output resolution appropriately.
To get the best picture quality, adjust the output resolution of the source device to 1280x720p.
Press the INPUT button to select HDMI input source in input source option of Select Main source menu.
Installation

Cable sample

	HDMI Cable (not supplied with the product)
	HDMI to DVI Cable (not supplied with the product)
	Analog Audio Cable (Stereo to RCA type) (not supplied with the product)



Power source

TO USE AC POWER SOURCE

Use the AC polarized line cord provided for operation on AC.
Insert the AC cord plug into a standard polarized AC outlet.
NOTES:

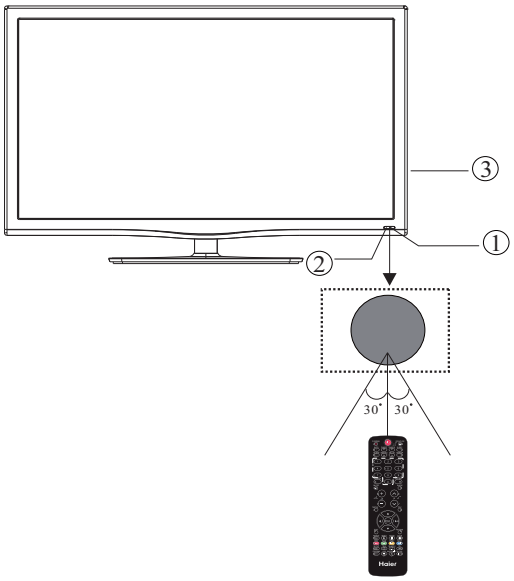
■ Never connect the AC line cord plug to other than the specified voltage.
Use the attached power cord only.

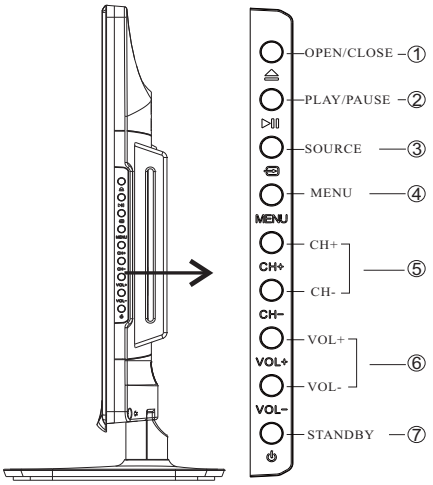
■ If the polarized AC cord does not fit into a non-polarized AC outlet,
do not attempt to file or cut the blade. It is the user`s responsibility to have an
electrician replace the obsolete outlet.

■ If you cause a static discharge when touching the unit and the unit fails to function, simply unplug the unit from the AC outlet and plug it back in. The unit should return to normal operation.

6. Operation Instructions

6-1 Front panel controls

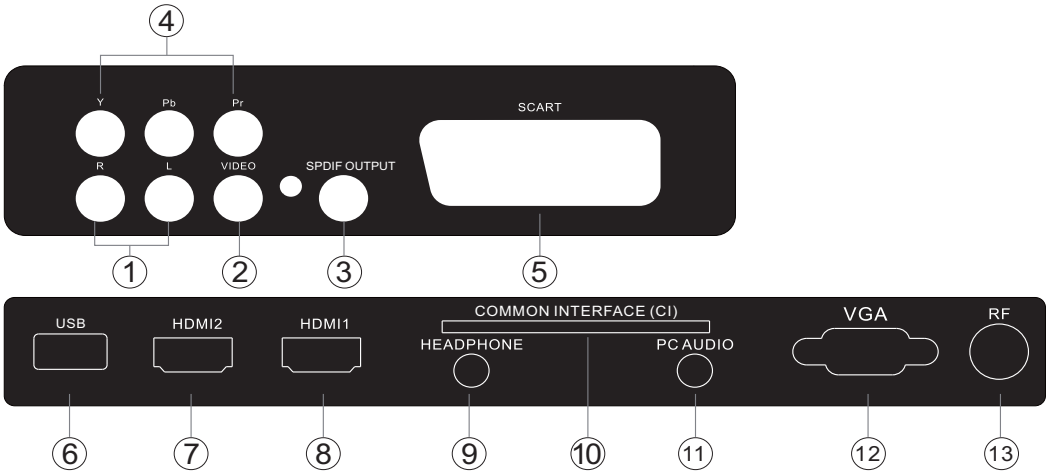




1	Remote control sensor.
2	Indicator LED: BLUE: POWER ON. RED: STAND BY.
3	Key board.

1	**OPEN/CLOSE**	
2	**PLAY/PAUSE**	
3	**SOURCE**	Display the input source menu.
4	**MENU**	Display main MENU.
5	**CH+/CH-**	In TV mode,press CH+ or CH- to change the channel up and down. In MENU, press CH+ or CH- to select items .
6	**VOL+/VOL-**	Adjust sound level. In MENU,adjust the item that you Selected.
7	**STANDBY**	

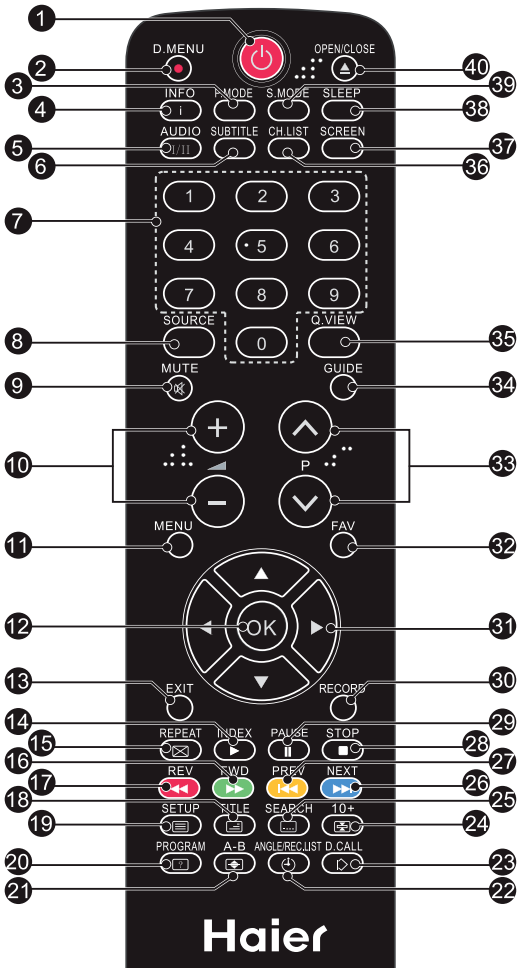
6.2 Back panel controls



1	**L/R AUDIO**	input
2	**VIDEO**	input
3	**S/PDIF**	digital audio output
4	**YPbPr**	input
5	**SCART**	input
6	**USB**	input
7	**HDMI2**	input

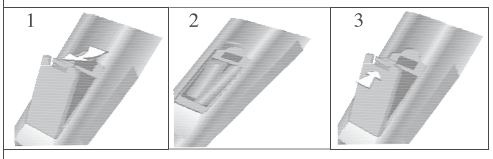
8	**HDMI1**	input
9	**HEADPHONE**	analogue audio output
10	**COMMON INTERFACE(CI)**	input
11	**PC AUDIO**	input
12	**VGA**	input
13	**RF**	input

6-3 Setting Up Your Remote Control



1.POWER: Press to turn on the TV.
3.P.Mode: To switch picture mode.
4.INFO: Press to display the current signal status,including input source and channel audio mode.
5.AUDIO I/II: Press to select **MONO,Nicam stereo** for ATV channel. Select Audio language for DTV channel.
6.SUBTITLE: Press to turn the subtitle **On** or **Off**.
7.Number Buttons: For direct access to channels.
8.SOURCE: To select input source.
9.MUTE: To disable or enable the sound output.
10.Volume Control: To adjust sound level.
11.MENU: To display TV menu.
12.OK: To confirm selection.
13.EXIT: To return to the previous menu or exit menu.
14.Teletext Index/USB PLAY
16.Teletext Green Button / USB Fast Forward
17.Teletext Red Button / USB Fast Rewind
18.Teletext Mix
19.Teletext Text
20.Teletext Reveal
21.Teletext Size
22.Teletext Time/ANGLE/REC.LIST(teletext time is no function)
23.Teletext Mode: No function
24.Teletext Hold
25.Teletext Subcode:Teletext Subpage
26.Teletext Blue Button / USB Next File
27.Teletext Yellow Button / USB Previous File
28.USB STOP
29.USB PAUSE
30.START RECORD
31.UP,DOWN,LEFT,RIGHT Cursor: Press to navigate your selection.
32.Fav: To access your favourite channels list in TV or DTV mode.
33.Select Programme: Press / Button to select the next or previous TV channel.
34.GUIDE: Press to display electronic programme guide in TV mode.
35.Q.View: To access the previously viewed channel.
36.CH.LIST: Press to display the channel list.
37.Screen: To change picture aspect ratio.
38.Sleep : Set timer to turn off the TV.
39.S.Mode: To switch sound mode.

Insert Batteries Into the Remote Control

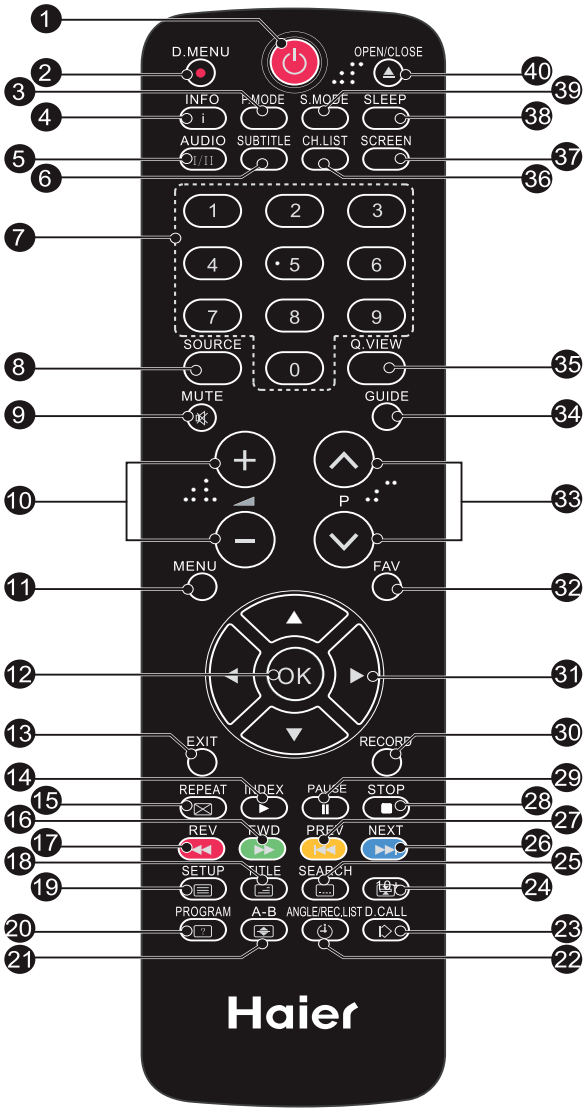


1. Remove the battery cover.
2. Inserting the 2 AAA 1.5V batteries making sure the polarity (+ or -) of the batteries matches the polarity marks inside the unit.
3. Mount the battery cover. Replace with new batteries when the TV set begins to show the following symptoms: Operation is unsteady or erratic. Sometimes the TV set does not function with Remote Control Unit.

Remark:

1) Alkaline Battery Recommended.
2) Remove batteries when they are exhausted or if the remote control is not to be used for Long time.

Remote Control - DVD section



2.D.MENU: During DVD playback, press MENU to display the disc menu.
5.AUDIO: Changes the audio language or audio channel.
6.SUBTITLE: Press to choose different captions (Requires support from disc).
7.**Numeric keys**:Press to set the time, select title, chapter or track you wish to play. Press the ENTER/OK Button to confirm. When a VCD is playing (with PBC off), press the Numeric keys to select a track directly.
12.**OK**:Press to confirm.
14.**PLAY**:Press to begin play of the DVD of media you wish to view.
15.**REPEAT**:Press to select between different repeat modes -Repeat Chapter / Repeat Title / Repeat Off(for DVD discs),Repeat Single/ Repeat Folder/All/ Repeat
Off(for VCD/CD/MP3 discs).
16.**FWD**:Press to fast-forward play in DVD, CD MP3 or VCD mode.Press repeatedly to scroll through fast-forward speeds. Press the Play/Pause Button to resume play
17.**REV**:Press to rewind play in DVD, CD MP3 or VCD mode. Press repeatedly to scroll through rewind speeds. Press the Play/Pause Button to resume play.
18.**TITLE**:Press to display the DVD Main Menu.
19.**DVD SETUP**:Press to enter the system setting menu. Press again to exit the menu.
20.**PROGRAME**:Programe the DVD.
21.**A-B**:Press to repeat a segment of the disc you are watching between A and B. (DVD mode)
22.**ANGLE**:Press to view scenes shot from different angles. (Disc support is required)
23.**D.CALL**:Press to show the information of the current playing disc.
24.**10+**:No function.
25.**SEARCH**:For DVD discs, press to choose the desired title and chapter and search the desired title, time and chapter time. For Super VCD,VCD,CD discs, press this button to search the desired disc time and track time and choose the desired track.
Note: During VCD playback, the PBC mode must be set to OFF.
26.**NEXT**:During DVD,CD,MP3, or VCD playback, press **NEXT** to play the next chapter, title or track.
27.**PREV**:During DVD, CD,MP3, or VCD playback, press **PREV** to play the previous chapter, title or track.
28.**STOP**:Press to stop play of the DVD you are watching at anytime.
29.**PAUSE**:Press to pause play of the DVD of media.
35.**Q.View**:Press to return to the Main Menu.
40.**OPEN/CLOSE**:To open the disc, press OPEN / CLOSE;To close the disc, press OPEN/CLOSE again.

REMOTE CONTROL

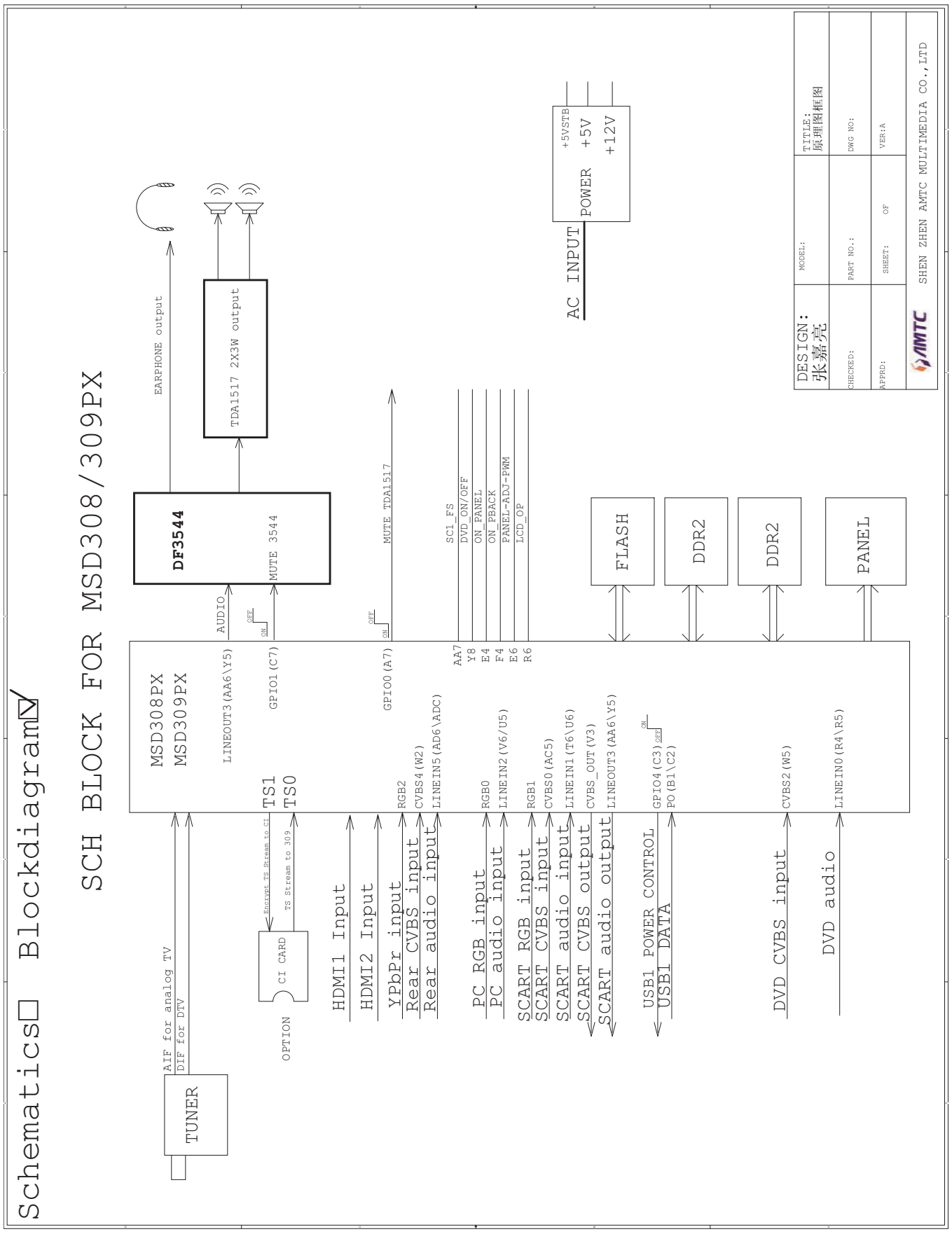
TELETEXT

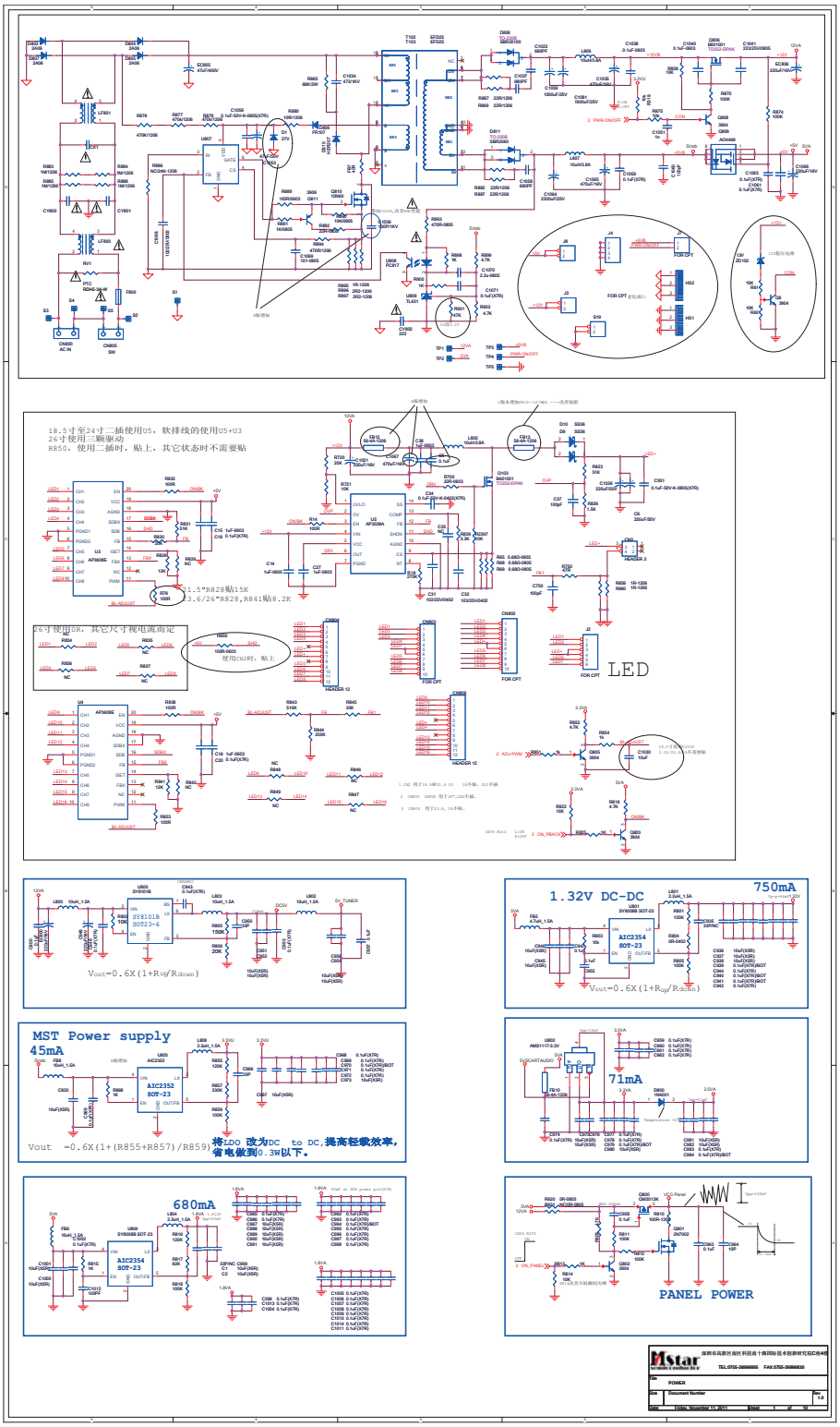
Teletext is an information system broadcast by certain channels which can be consulted like a newspaper. It also offers access to subtitles for viewers with hearing problems or who are not familiar with the transmission language(cable networks, satellite channels, etc.)

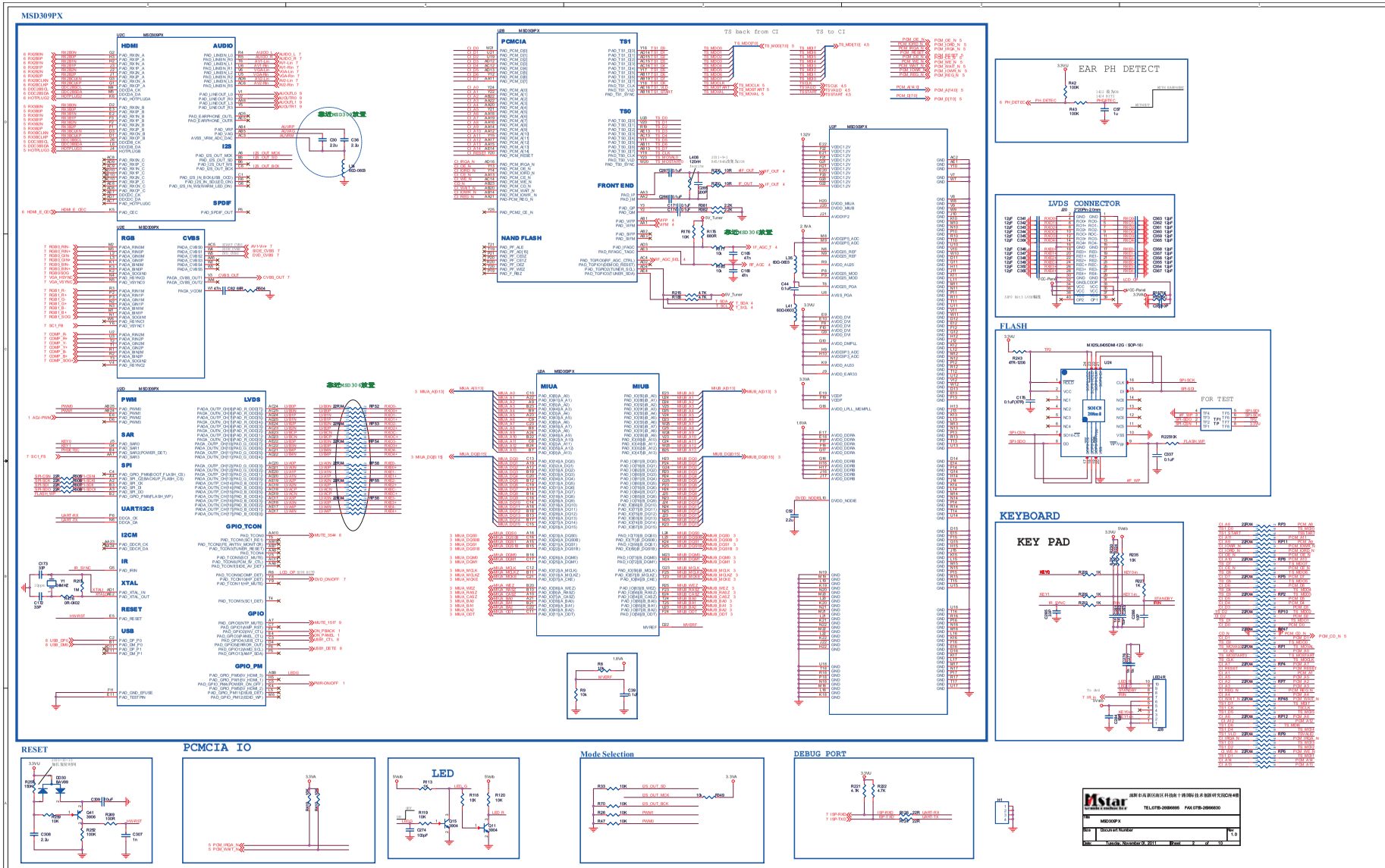
Press:	You will obtain:
TEXT	This is used to call or exit teletext modes. The summary appears with a list of items that can be accessed. Each item has a corresponding 3 digit page number. If the channel selected does not broadcast teletext, theindication 100 will be displayed and the screen will remain blank (in this case, exit teletext and select another channel).
SELECTING A PAGE	Enter the number of the page required using the 0 to 9 up/down. Example: page 120, enter 120. The number is displayed top left, the counter turns and then the page is displayed. Repeat this operation to view another page. If the counter continues to search, this means that the page is not transmitted. Select another number.
DIRECT ACCESS TO THE ITEMS	Coloured are as are displayed at the bottom of the screen. The 4 coloured keys are used to access the items or corresponding pages. The coloured areas flash when the item or the page is not yet available.
INDEX	This returns to the contents page (usually page 100).
SUB PAGE	Certain pages contain sub-pages which are automatically displayed successively. This key is used to stop or resume sub-page acquisition. The indication appears top left.
HOLD	To freeze the page.
REVEAL	To display or hide the concealed information (games solutions).
LIST	The user can set four favorite pages to be directly linked to the four color keys. While list mode is activated, it is not possibility to use TOP or FLOF navigation with the colorkeys. The favorite page numbers should be stored and restored to/from nonvolatile memory for each channel by the system software.

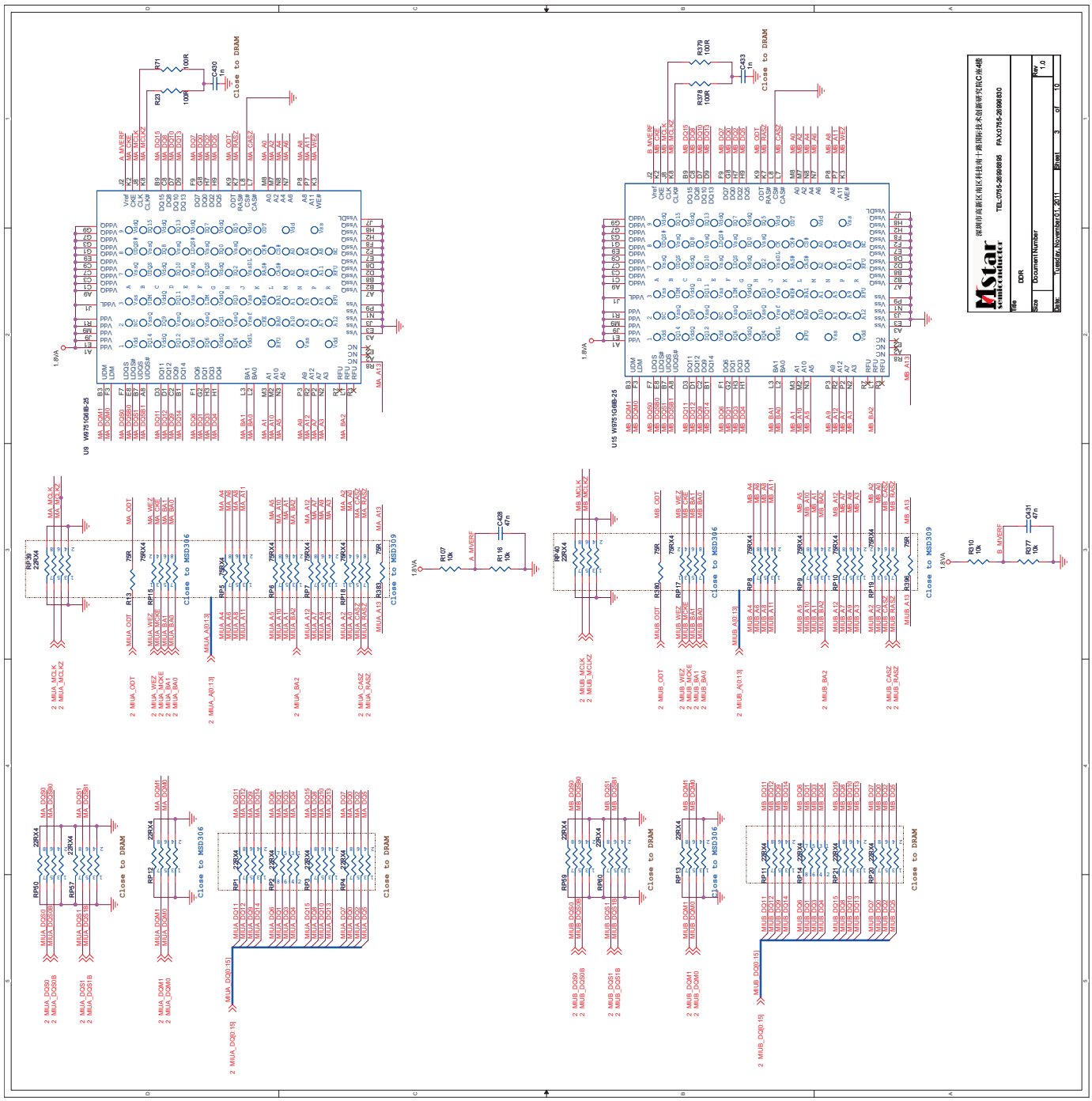
7. Electrical parts

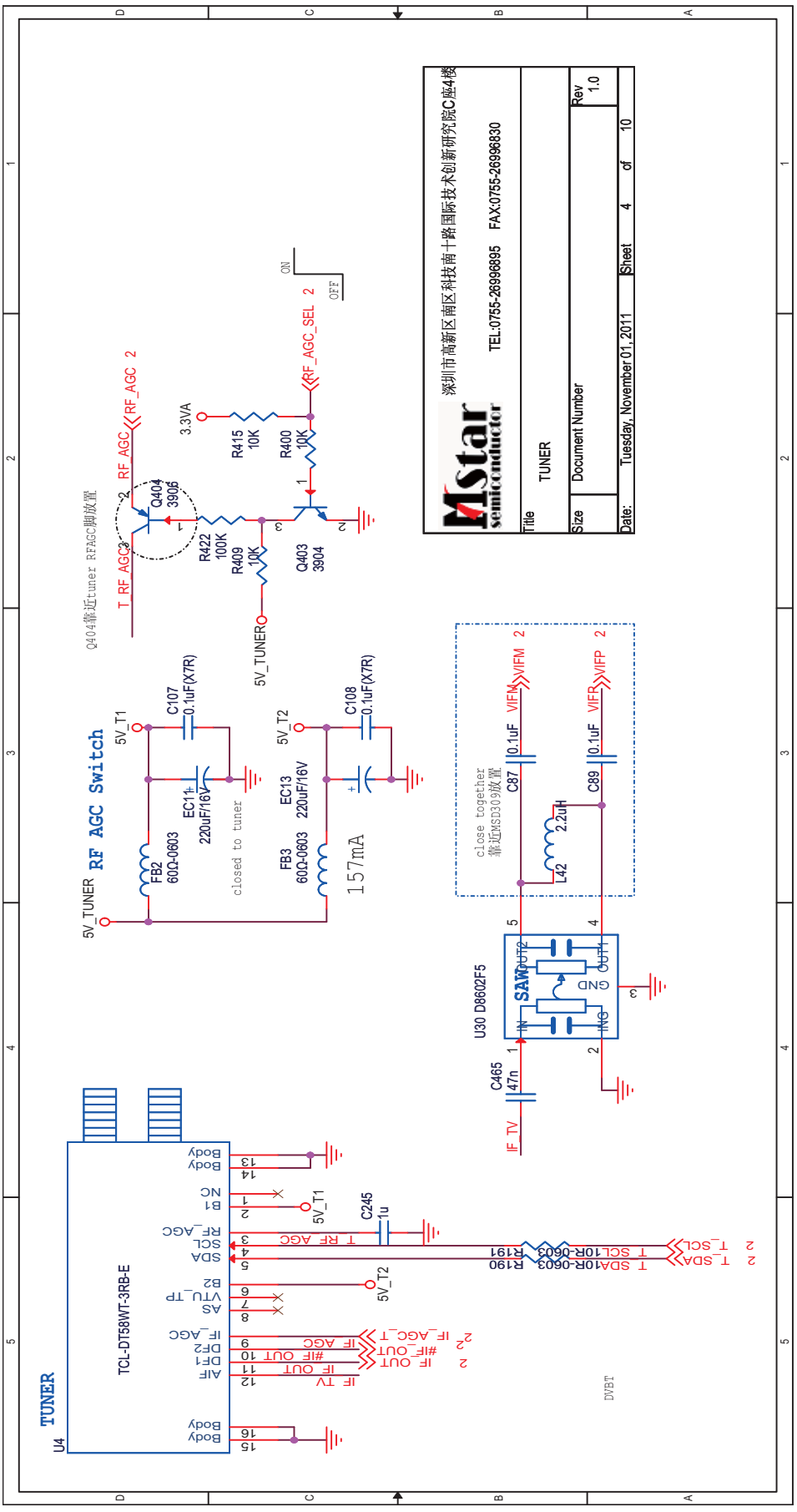
7-1. Block diagram




18.5寸至24寸二插使用U5，软排线的使用U5+U3
26寸使用三颗驱动
R850，使用二插时，贴上，其它状态时不需要贴
LED
1.32V DC-DC
750mA
Vout=0.6X(1+Rup/Rdown)
MST Power supply
45mA
Vout =0.6X(1+(R855+R857)/R859)
将LDO 改为DC to DC,提高轻载效率,
省电做到0.3W以下。
71mA
680mA
PANEL POWER
POWER


MSD309PX
HDMI
AUDIO
PCMCIA
TS1
TS0
FRONT END
NAND FLASH
RGB
CVBS
PWM
SAR
SPI
UART/I2CS
I2CM
IR
XTAL
RESET
USB
I2S
SPDIF
LVDS
GPIO_TCON
GPIO
GPIO_PM
MIUA
MIUB
TS back from CI
TS to CI
EAR PH DETECT
LVDS CONNECTOR
FLASH
KEYBOARD
KEY PAD
RESET
PCMCIA IO
LED
Mode Selection
DEBUG PORT




TUNER
U4
TCL-DT58WT-3RB-E
RF AGC Switch
U30 D8602F5
SAW
DVBT
Mstar semiconductor
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Title TUNER
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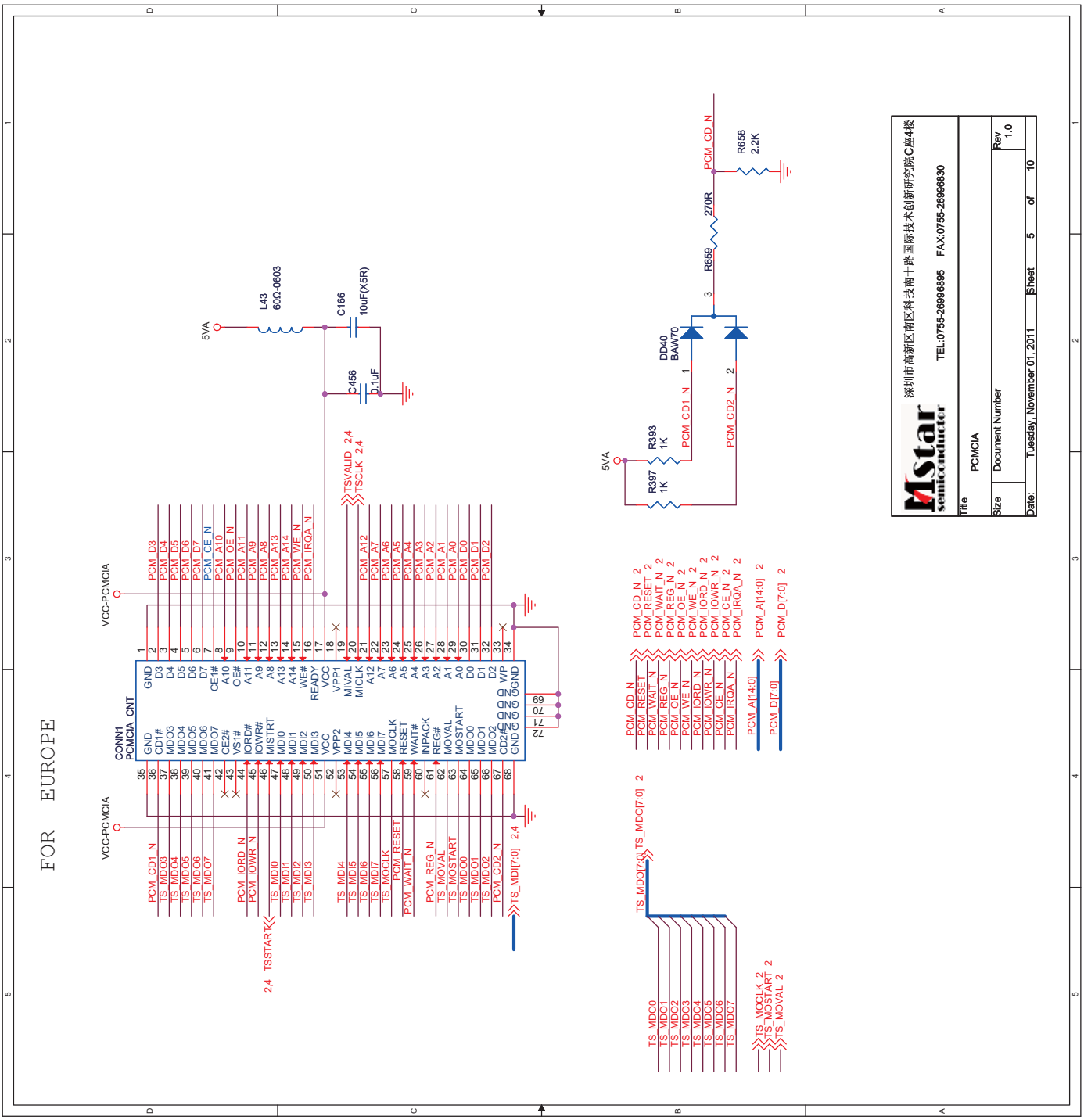
FOR EUROPE
CONN1
PCMCIA_CNT
VCC-PCMCIA
5VA
L43
60Ω-0603
C166
10uF(X5R)
C456
0.1uF
DD40
BAW70
R393
1K
R397
1K
R659
270R
R658
2.2K
PCM_CD_N
PCM_CD1_N
PCM_CD2_N
TSVALID 2,4
TSCLK 2,4
TSSTART 2,4
TS_MDI[7:0] 2,4
TS_MDO[7:0] 2
PCM_A[14:0] 2
PCM_D[7:0] 2
TS_MOCLK 2
TS_MOSTART 2
TS_MOVAL 2
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Title PCMCIA
Size Document Number Rev 1.0
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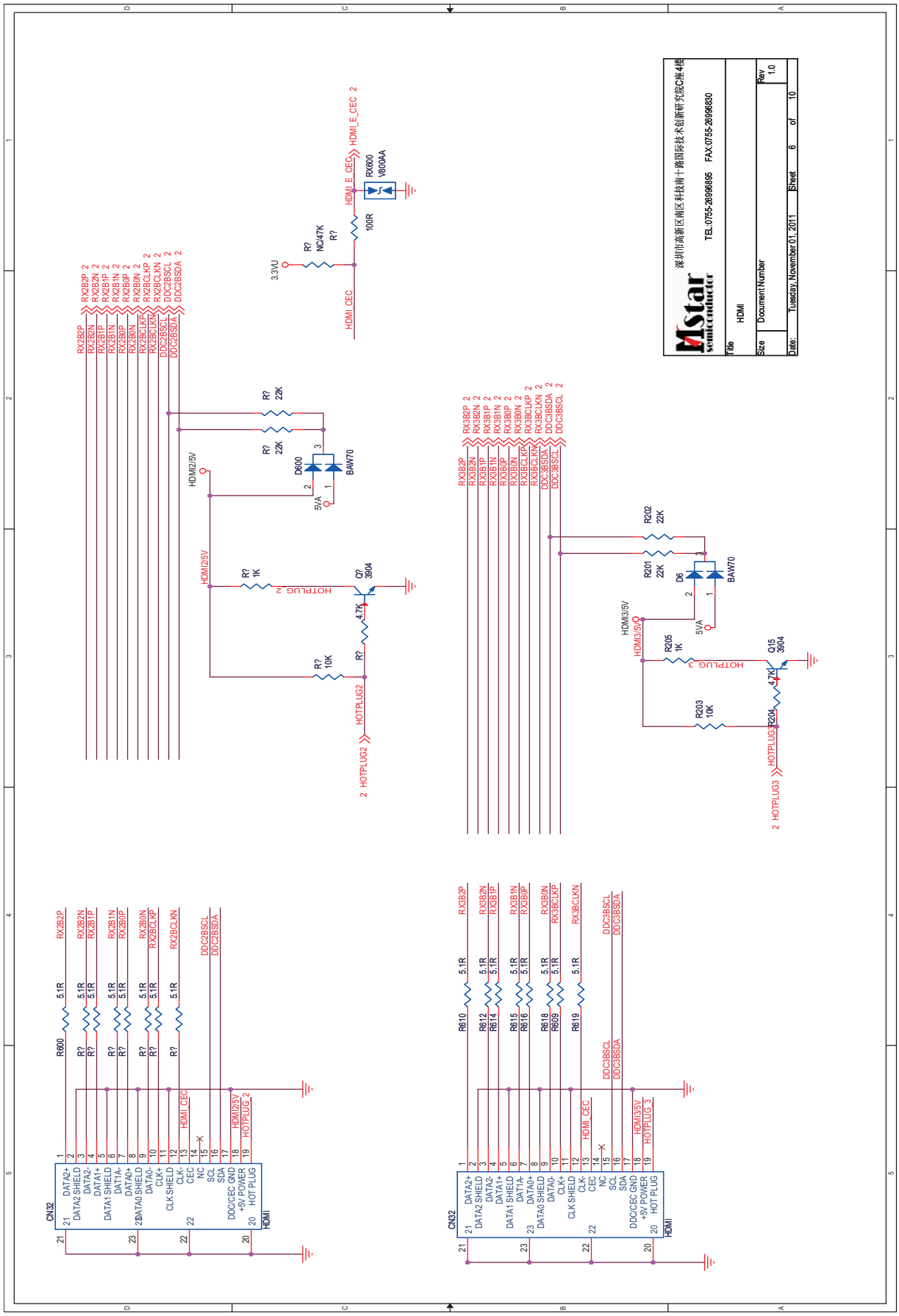
CN32
HDMI
R600
5.1R
RX2B2P
RX2B2N
RX2B1P
RX2B1N
RX2B0P
RX2B0N
RX2BCLKP
RX2BCLKN
DDC2BSCL
DDC2BSDA
HDMI_CEC
HOTPLUG_2
HDMI5V
R610
R612
R614
R615
R616
R618
R609
R619
RX3B2P
RX3B2N
RX3B1P
RX3B1N
RX3B0P
RX3B0N
RX3BCLKP
RX3BCLKN
DDC3BSCL
DDC3BSDA
HDMI3/5V
HOTPLUG_3
3.3VU
R?
NC/47K
100R
RX600
V800AA
HDMI_E_CEC
HDMI_CEC
D600
BAW70
5VA
R?
22K
HDMI2/5V
R?
1K
Q?
3904
4.7K
R?
10K
HOTPLUG2
R202
22K
R201
22K
D6
BAW70
R205
1K
Q15
3904
R203
10K
R204
4.7K
HOTPLUG3
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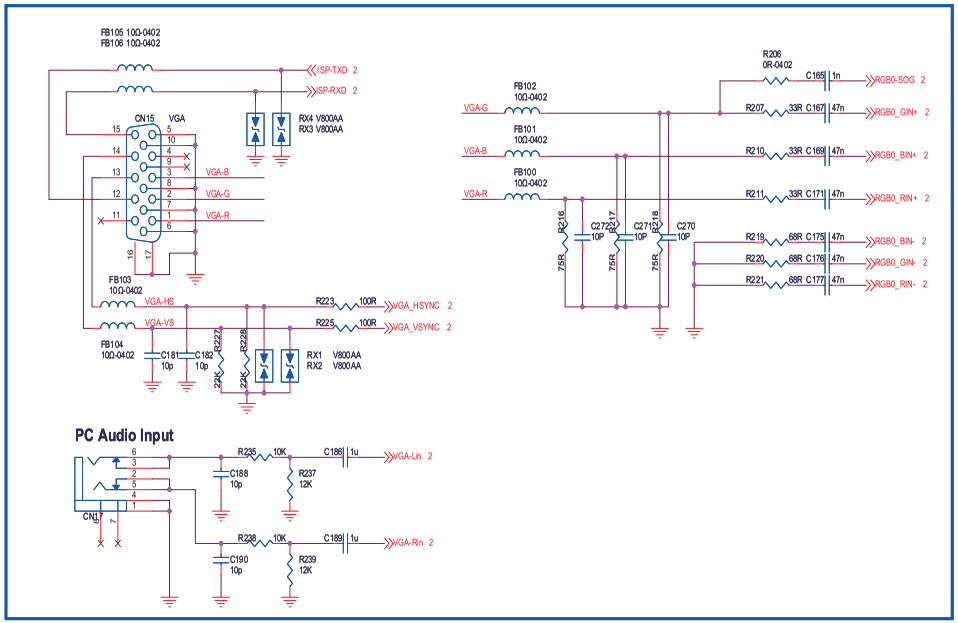
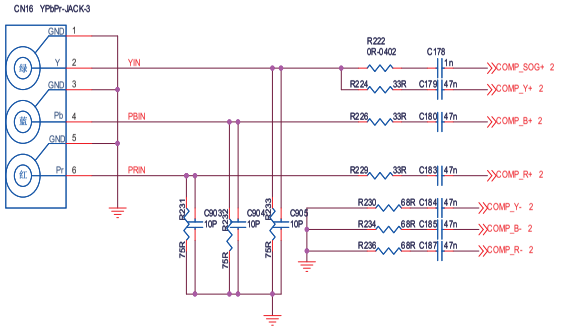
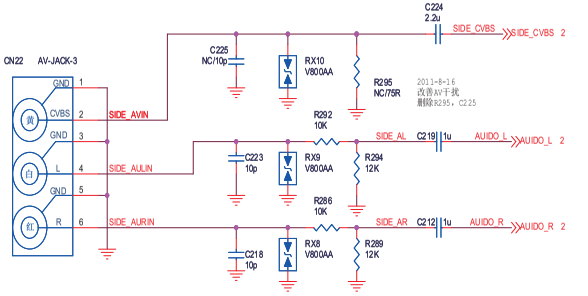
VGA INPUT



CN16 YPbPr-JACK-3

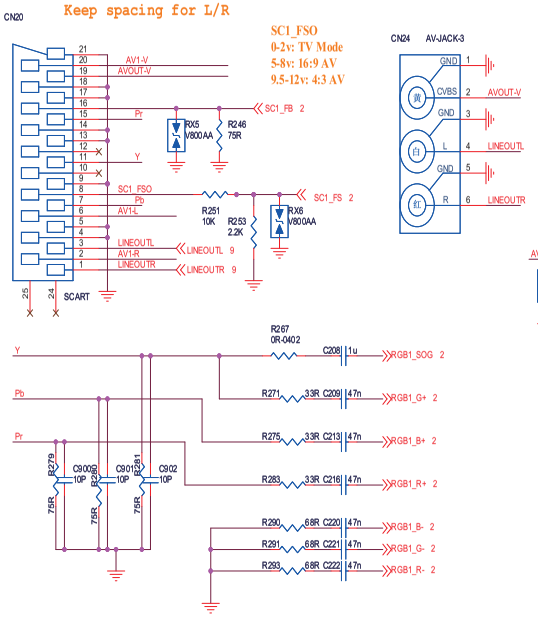


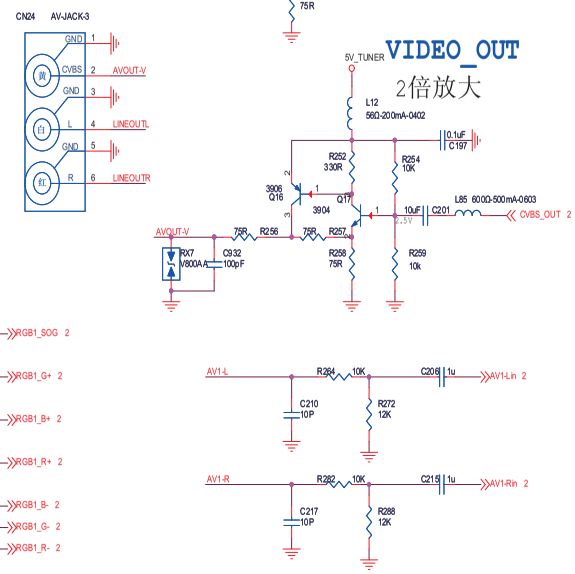
CN22 AV-JACK-3

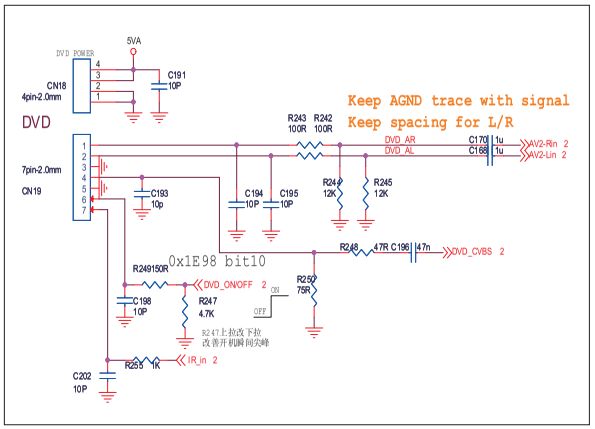


FULL SCART

Keep AGND trace with signal
Keep spacing for L/R







MStar semiconductor
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Size	Document Number	Rev 1.0
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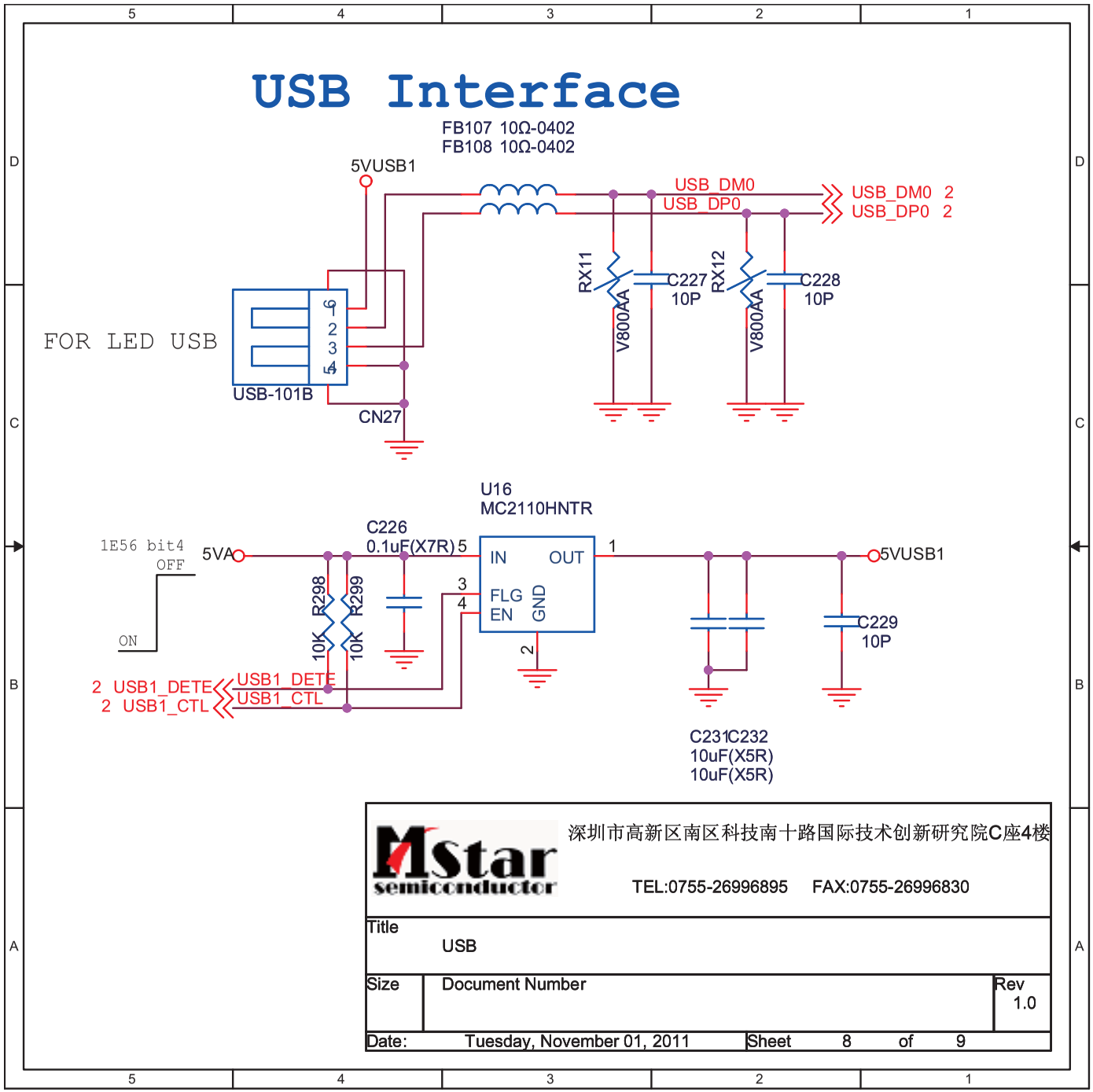
USB Interface
FB107 10Ω-0402
FB108 10Ω-0402
5VUSB1
USB_DM0
USB_DP0
USB_DM0 2
USB_DP0 2
FOR LED USB
USB-101B
CN27
RX11
RX12
V800AA
V800AA
C227
10P
C228
10P
U16
MC2110HNTR
C226
0.1uF(X7R)
1E56 bit4
OFF
ON
5VA
R298
R299
10K
10K
IN
OUT
FLG
EN
GND
2 USB1_DETE
2 USB1_CTL
USB1_DETE
USB1_CTL
5VUSB1
C229
10P
C231C232
10uF(X5R)
10uF(X5R)
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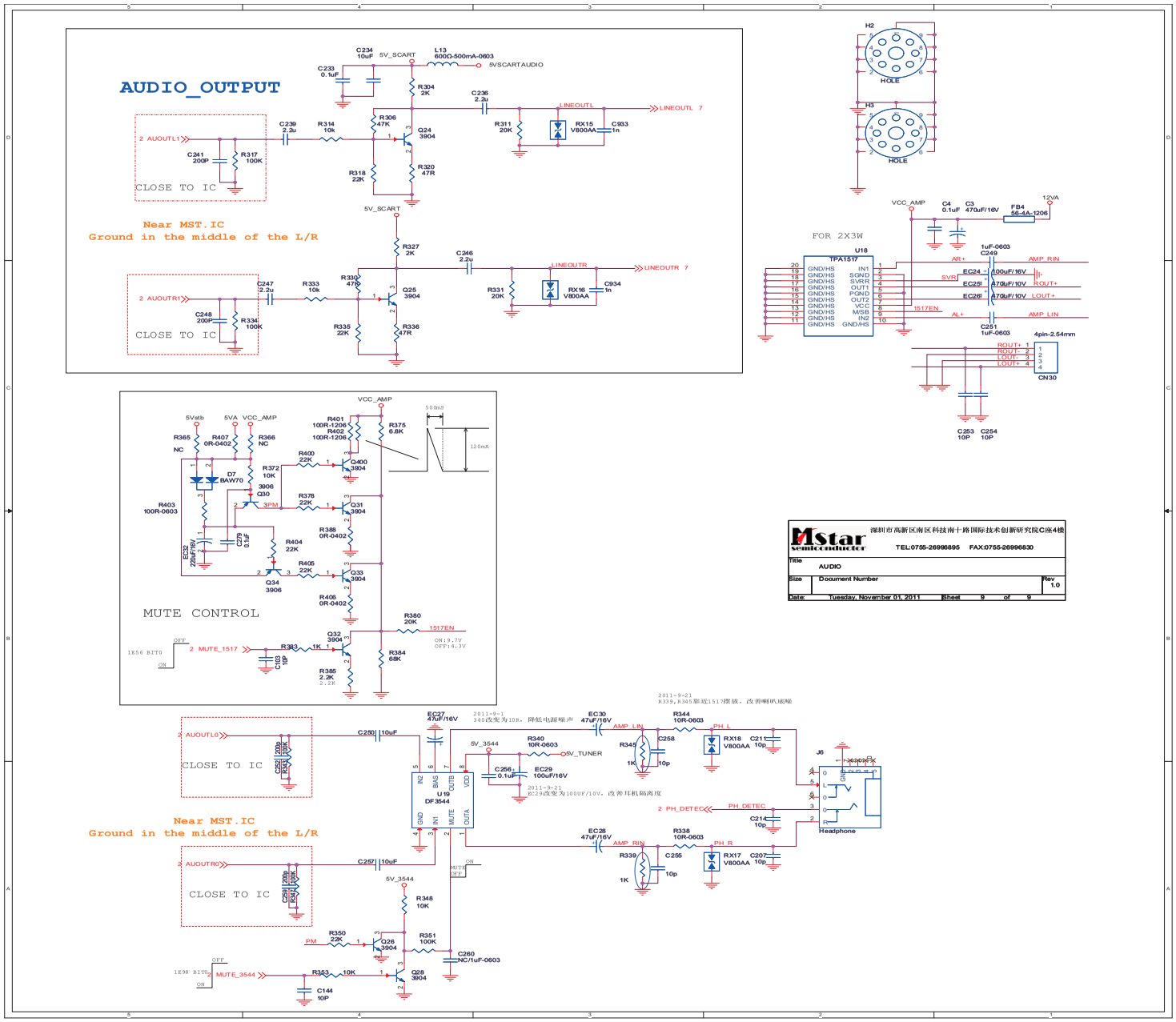
Title
USB
Size
Document Number
Rev
1.0
Date: Tuesday, November 01, 2011
Sheet 8 of 9


AUDIO_OUTPUT
CLOSE TO IC
Near MST.IC
Ground in the middle of the L/R
MUTE CONTROL
FOR 2X3W
TPA1517
DF3544
Headphone
CN30
MStar Semiconductor
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TEL:0755-26996895 FAX:0755-26996830
Title AUDIO
Size Document Number Rev 1.0
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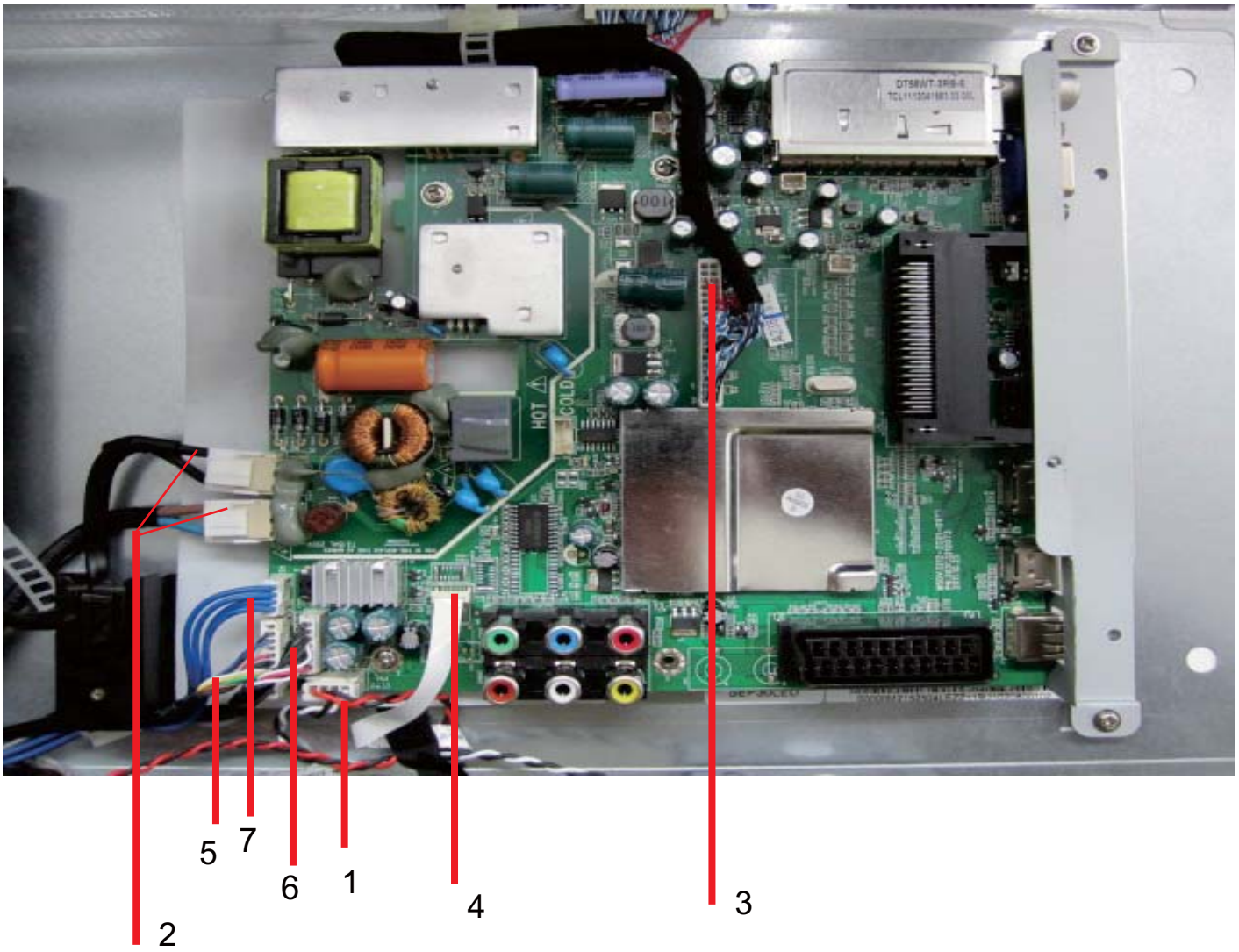
7-3 .Wiring Connection Diagram

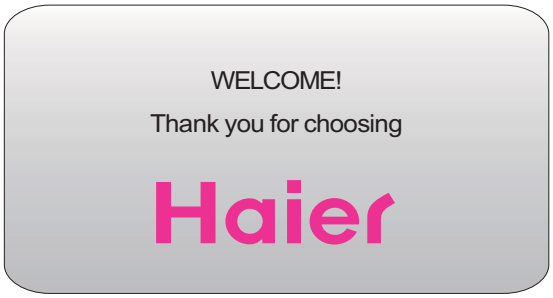


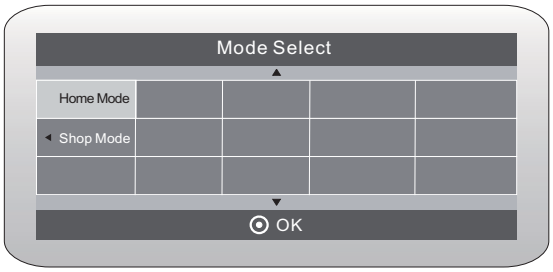
NO.	Name
1	Connection Wire(For Speaker)
2	Connection Wire(Power Wire)
3	LVDS Wire
4	Connection wire(Blacklight)
5	Connection Wire(For Keyboard and Remote)
6	Connection wire(For DVD Power)
7	Connection wire(For DVD)

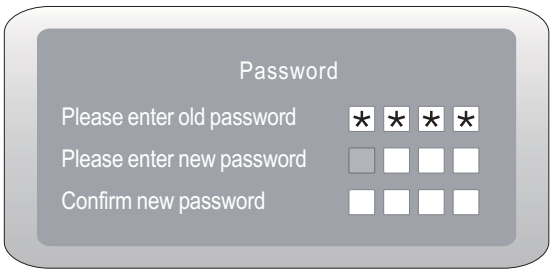
8. Measurements and Adjustments

Installation Guide

The installation guide only appear when the TV first time turn on or reset to factory set.



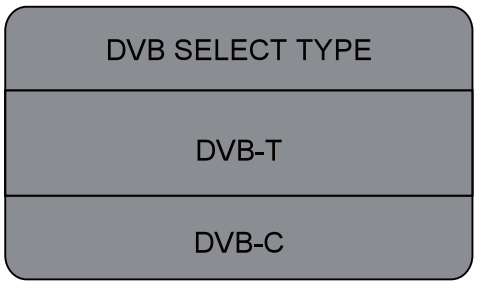




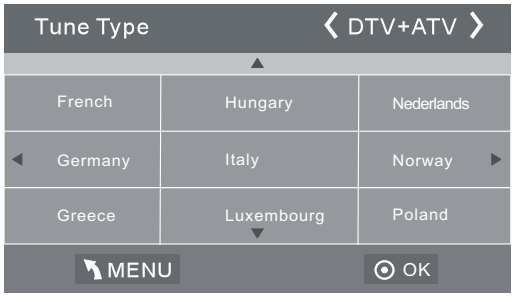
1).Press the ▼▲buttons to navigate the menu and change the settings. Press the OK button to confirm.
Select your desired language ,Home/Shop Mode to be displayed on the menu.
The default password is 6666.

HOME or SHOP modes
1. Home Mode is an energy-saving Mode. Home Mode is recommended for normal viewing setting and is set as default during manufacturer.
2. Shop Mode is an option for retailers for Advertising or product presentation.
Shop Mode has a brighter image than Home Mode.
3. You may switch between Home or Shop Mode as you choose.If you choose Shop Mode ,it will enter HDMI1 source automatically,and you wil press Exit key to exit POP menu.

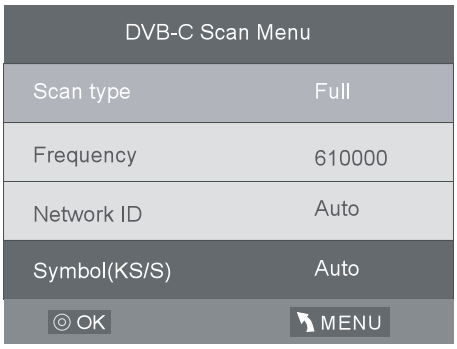
2). Press the buttons to select DVB-T/DVB-C and then press the OK button to confirm.



a. If you select DVB-T, the next step is to select the Tune type and country then press the OK button to start tuning.



b. If you select DVB-C, the next step is to config the DVB-C system like (scan type / Frequency/ Network ID/Sy mbol(KS/S) then press OK button to into the tune type and country select menu, this step is the same as DVB-T, select the tune type (DTV/ATV).
Choose the right country, press OK button to start tuning.

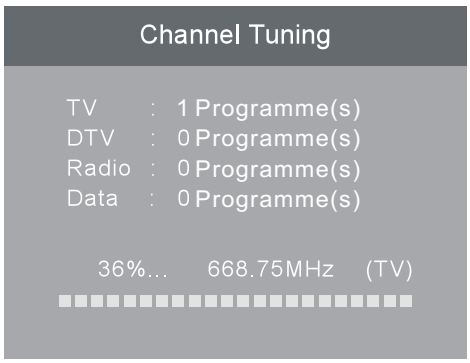


3). Channel tuning will commence. This operation may take up to 6 minutes. The display will show the progress of the tuning and the number of channels found.

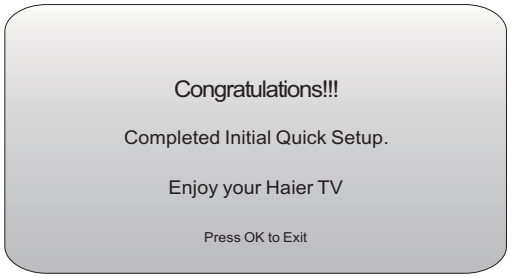
4). If you want to skip the ATV tuning, press the MENU button to interrupt the tuning half way. A pop-up screen will be displayed, press the button to select YES to confirm. You will then go straight to DTV tuning.

You may repeat the above step if you also want to skip the DTV tuning. An installation reminder will appear the next time you turn on the TV.

5). After tuning is complete, the channels are arranged in a preset order. If you wish to skip channels, modify the preset order or rename channels, select Programme Edit under the Channel menu.



6) Congratulations

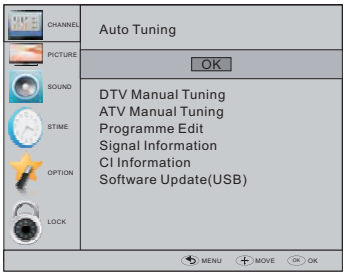


1. CHANNEL MENU

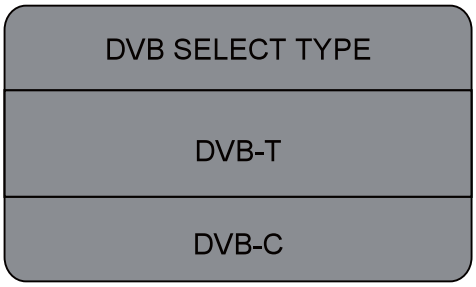
1. 1 Auto Tuning (DVB-T)

1). Press the MENU button and then press the ▼▲ buttons to select the CHANNEL menu and then press the OK button.

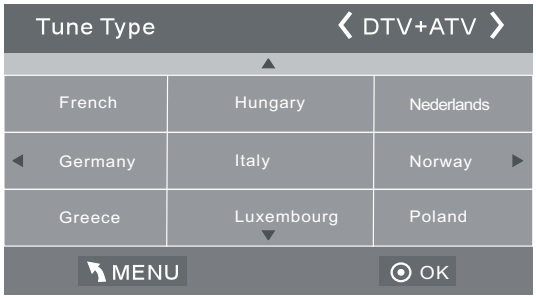
2). Press the ▼▲buttons to select Auto Tuning and then press the OK button.



3). Press the ▼▲buttons to select DVB-T/ DVB-C Press select DVB-T and then press the OK button to confirm.



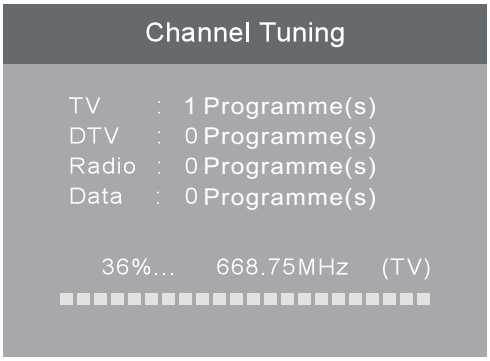
4). In the Tune Type menu, press the◀▶buttons to select ATV / DTV / DTV + ATV. Press the▼button and then press the◀▶▼▲buttons to select the country where you will operate the TV. Press the OK button to confirm



5). Channel tuning will commence. This operation may take up to 6 minutes. The display will show the progress of the tuning and the number of channels found.

6). If you want to skip the ATV tuning, press the MENU button to interrupt the tuning half way. A pop-up screen will be displayed, press the ◄ button to select YES to confirm. You will then go straight to DTV tuning. You may repeat the above step if you also want to skip the DTV tuning. An installation reminder will appear the next time you turn on the TV.

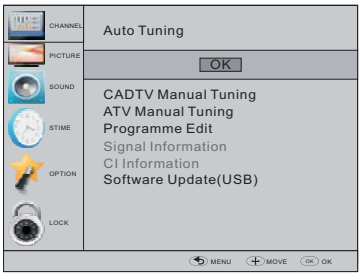
7). After tuning is complete, the channels are arranged in a preset order. If you wish to skip channels, modify the preset order or rename channels, select Programme Edit under the channel menu.



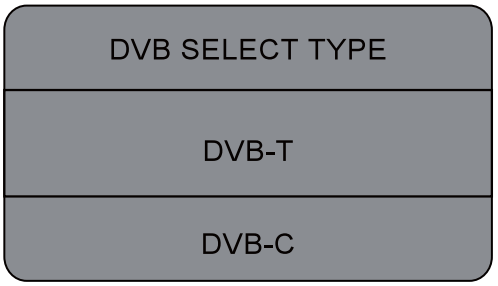
1.2 Auto Tuning (DVB-C)

1). Press the MENU button and then press the▼▲ buttons to select the CHANNEL menu and then press the OK button.

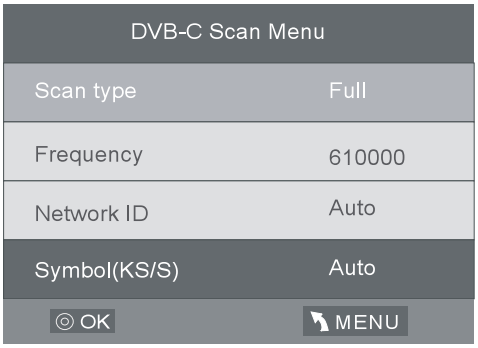
2). Press the▼▲ buttons to select Auto Tuning and then press the OK button.



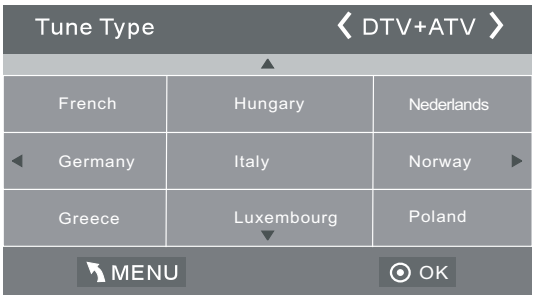
3). Press the▼▲buttons to select DVB-T/DVB-C Press select DVB-C and then press the OK button to confirm.



4). Press▼▲buttons to select Scan type/Symbol (Ks/S) press the OK button to confirm.



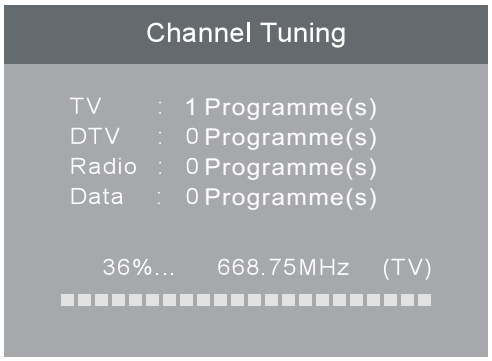
5). In the Tune Type menu, press the◄►buttons to select ATV / DTV / DTV + ATV. Press the▼button and then press the◄►▼▲buttons to select the country where you will operate the TV. Press the OK button to confirm.



6). Channel tuning will commence. This operation may take up to 6 minutes. The display will show the progress of the tuning and the number of channels found.

7). If you want to skip the ATV tuning, press the MENU button to interrupt the tuning half way. A pop-up screen will be displayed, press the ‹ button to select YES to confirm. You will then go straight to DTV tuning. You may repeat the above step if you also want to skip the DTV tuning. An installation reminder will appear the next time you turn on the TV.

8). After tuning is complete, the channels are arranged in a preset order. If you wish to skip channels, modify the preset order or rename channels, select Programme Edit under the channel menu.



NOTE:

All the channels including ATV, DTV and Radio can be tuning by one time,if the Tune Type is DTV+ATV .

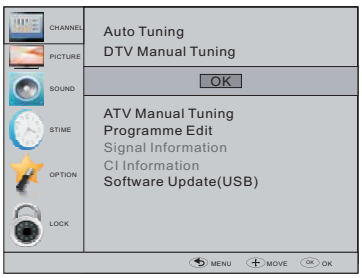
All the stored channels will be disappear after auto tuning .

After auto tuning , the channel will skip to the first DTV channel.

2. 1 DTV Manual Tuning (DVB-T)

1). Press the MENU button and then press the ▼▲ buttons to select the CHANNEL menu and then press the OK button.

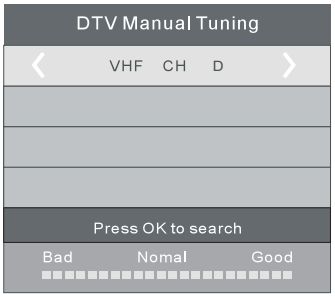
2). Press the▼▲buttons to select DTV Manual Tuning and then press the OK button.



3). The DTV Manual Tuning screen will pop up. Press the◄►buttons to select the desired UHF channel and then press the OK button to commence the search of that channel. When the signal has been tuned, the picture and signal strength will be displayed on the screen.

4). Press the MENU button to return back to the main menu.

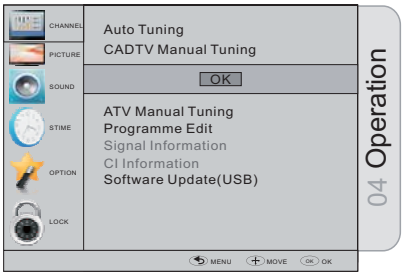
5). Press the EXIT button to exit the menu.



2. 2 DTV Manual Tuning (DVB-C)

1). Press the MENU button and then press the▼▲ buttons to select the CHANNEL menu and then press the OK button.

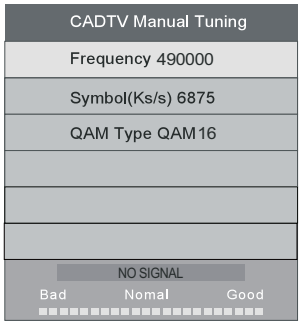
2). Press the▼▲buttons to select CADTV Manual Tuning and then press the OK button.



3). The CADTV Manual Tuning screen will pop up. Press the▼▲buttons to select(Frequency /Symbol (ks/s/QAM Type QAM) press the OK button to commence the search of that channel. When the signal has been tuned, the picture and signal strength will be displayed on the screen.

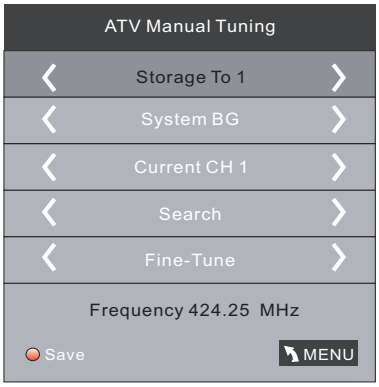
4). Press the MENU button to return back to the main menu.

5). Press the EXIT button to exit the menu.



3.1 ATV Manual tuning :

You can change the sound system to search the analog TV channels and fine tune the channels , then storage the channels you selected.



NOTE:

Press teletext red button to storage to channels after manual tuning .

1). **Program edit:**

You can Delete ,Rename ,Move, Skip , FAV any programs.

Delete

Press teletext red button , the program in cursor will delete.

Rename:

Only can rename ATV programs .
Move the cursor to the program, press teletext green button to rename the program.
Press ▼▲to choose the character. Press ◄► to move the cursor .
Press MENU button to exit edit , Press EXIT to exit the menu.
Note: ATV programs name only can be 5 character, DTV programs name can be 25 character.

Move

Use the Arrow Buttons to select the channel you wish to move. Then press the Yellow Button to select Move function. Once active use the Arrow Buttons to move and then press OK to confirm.

Skip

Press ▼▲to choose the program , press teletext blue button to skip this program, The ⃠ will show on the right side of the program .
Choose the skipped program, press blue button again , you can cancel the skip ,The ⃠ will disappear .

Favourite

Press⌄⌃ to choose the program , press FAV button , it will show ♥ on the right side of the program.Choose the FAV program , press FAV button again , you can cancel the FAV, the ♥ will disappear .

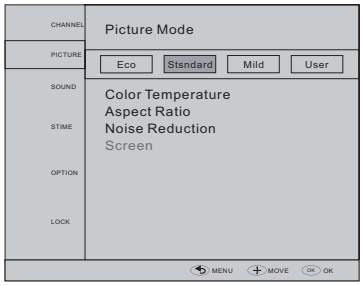
Once your favorite group is created, you can press the FAV key to quickly access your favorite channel.

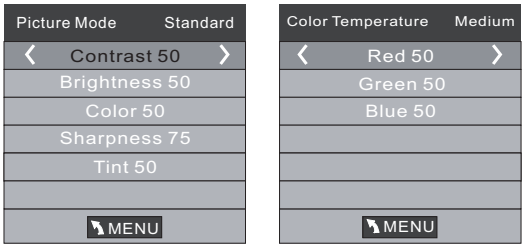
2). CI information: (optional)

This menu can display the CI card' s information.

2. PICTURE MENU

The second item of the MENU is PICTURE MENU.
You can adjust picture effect here, such as contrast, brightness, etc.
Press OK to move, press OK to adjust.



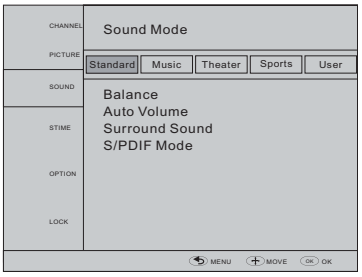


NOTE:

1).Tint is available in NTSC system only.
2).There are four colors temperature modes can be selected medium, warm, cool,user
3).Screen is available in PC mode only which can adjust Horizontal position, vertical position, size and phase.

3.SOUND MENU

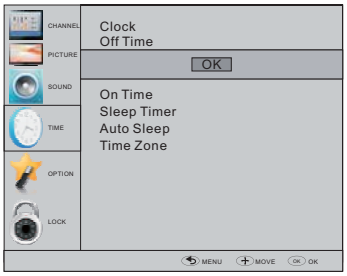
The third item of the MENU is the SOUND MENU.
You can adjust the sound effect here such as treble, bass, balance etc.
Press ▼▲ to move, press OK to adjust.



Note:
Auto volume: only available when the input signal volume is too large or distortion.

4.TIME MENU

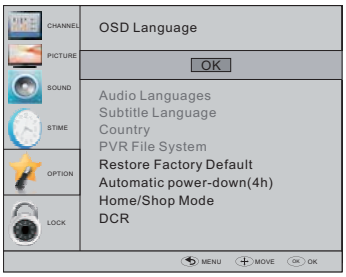
The forth item of the menu is the TIME MENU
You can adjust the clock, power on/off time, sleep time etc Press◄► to move, press OK to adjust.



NOTE:
Within 15 minutes there is no signal, the TV will auto sleep , if Auto Sleep is set ON. The clock time can get from the DTV system auto.

5.OPTION MENU

The fifth item of the MENU is the OPTION MENU. You can adjust the Menu language, Audio language,Subtitle language etc.



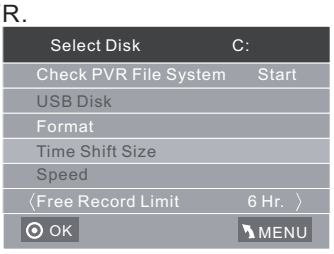
Automatic Power-down 1.If after 4 hours from switch on and no changes have been made to the TV, for example no channel or volume changes,the TV will start the automatic power down sequence.
And pop-up window will appear on screen.

After 1 andby. To overrid e remote control

XXX's to automatic power-down
Please press any Key to Cancel

2. To cancel the automatic power-down
On the Option Menu select Automatic power-down(4H)
Press OK. A pop-up message will appear
"Are you sure you want to enable automatic power-down?"
Use the right arrow key to select NO
The TV screen returns to the Option Menu and the Automatic power-down(4H) option will display.
Automatic power-down(4H) OFF
To return to auto shutdown after 4 hours repeat the above except use the left arrow key to select YES

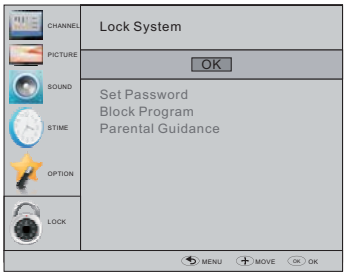
In PVR File system menu you can set up USB disk for PVR.



NOTE:
Restore factory default will clear all the programs and password.

6.LOCK MENU

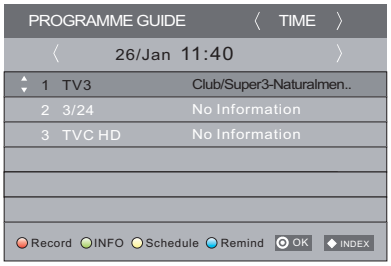
The sixth item of the menu is the LOCK MENU
You can lock system, set password, block program and set parental guidance Once you set the lock system on you can not search the channels or change any programs.



NOTE:
The default pass word is 0000, If you forget the password, you can use the super password:9443.
Block program: Press ▼▲ to choose the program ,press teletext green button to block the program. If you want unblock the program, pls enter the main menu , input the password, then press green button again.Parental guidance: Press ◀▶ to choose rating.

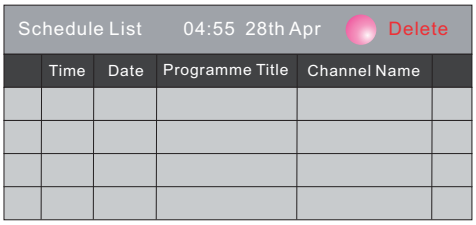
7.EPG Menu(Electronic Program Guide).

The EPG menu is used to look at what is being broadcasted on DTV or Radio channel in the day.
To access the EPG menu, press the EPG botton,the following menu will be displayed:



1. INFO
Use to choose the programs , Press INFO key, you can display the highlight program's information.

2. Schedule
Press the teletext yellow key, It can list all the reminder schedule, press ▼▲ to choose the list, press red key DELETE to delete the schedule list.



3. Record
Press the red key ,It can set the program to be recorded.

4. Remind
Press the blue key to choose one program and set up one reminder time, the TV screen will skip to the choosed program in the reminder time automatically.

8.PVR function

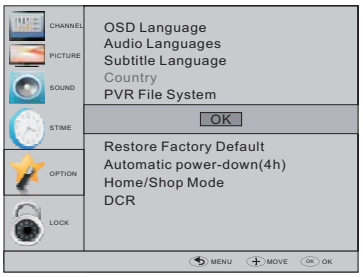
1.Prepare to record the program

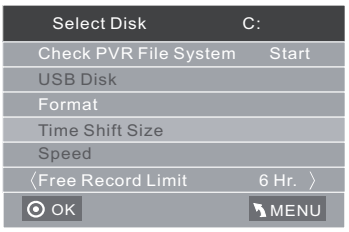
PVR function only works in DTV.
From OPTION MENU enter into PVR File System In "OPTION MENU", please choose "check PVR File System". Click "OK", until "checking" change into "Success".
Note: please check the term "speed". If it is "HD support", that means the speed of USB device is available for time shift and record. If not, please format the device, to make sure the device available. The default "Free Record Limit" is 6 hour, if the space on the disk is big enough. If the space is not
big enough, the record time should be shorter, depends on the room on the device. During the "check PVR File System" checking, please do not take any other operation until it finished.

The recordings must be done with the TV PVR system. It can only be played in the same TV, not in any other kind of device (computer, DVD, etc.) which is not compatible with .
TS. file format.
Please note that in order to carry out any kind of recording, the TV will require you to format the connected USB device to store the recording.

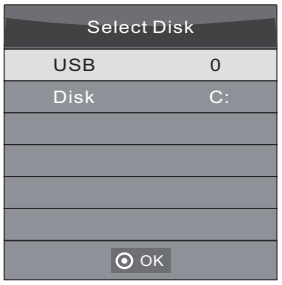
WARNING. WHEN YOU FORMAT, THE EXTERNAL USB DEVICE YOU WILL LOSE ALL THE FILES AND INFORMATION YOU HAVE STORAGE ON THE DEVICE.

The USB file system will limit the size of the storage size.
File system: NTFS up to 2TB
FAT32 with up to 192GB
FAT16 with up to 2GB
From OPTION MENU enter into PVR File System as below:



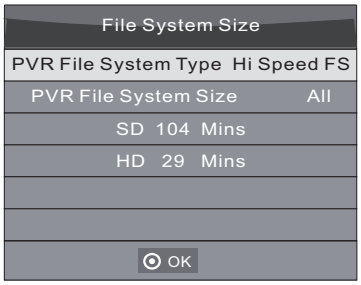


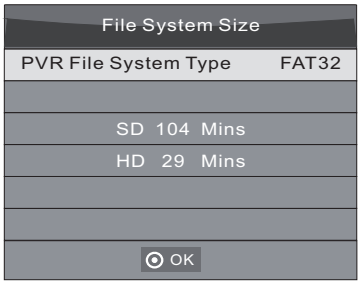
Select Disk:select which disc to save the record file.



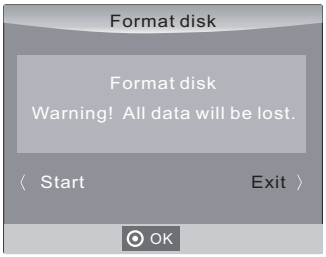
Check PVR File System: check if the PVR File System set up in the USB device or not.

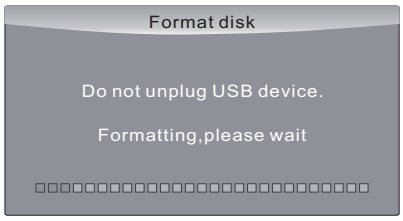
Format:



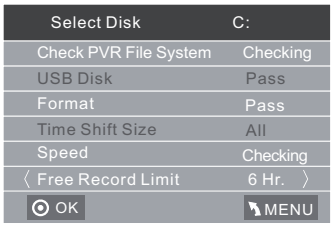


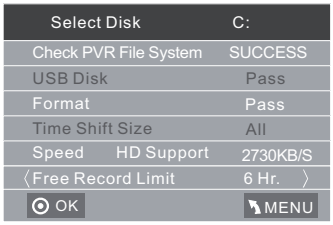
(Suggest to format the format the device by “High Speed Fs...”, which can speed up the record.)



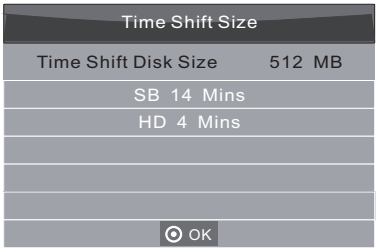


below menu appear after Format finish:





If you select the “Hi Speed FS” format mode, then you can change the time shift size:



2.Record the program

As playing the DTV source, choose the channel and click “record”, the record frame will pop up. Click “record” again, the record frame will disappear and the “REC” icon still on the left top. It will disappear until you click “stop”.

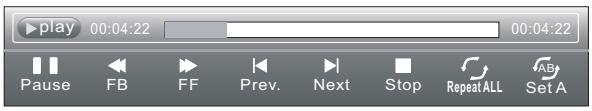
3.Play the record

The program recorded on the “USB”will be saved in the folder “_MSTPVR” on the device.
1.The USB storage size can be between 128MB and 500GB in size, but for practical use 2GB to 500GB is recommended.
2. Video may become pixelated when Video bit rate is too low. This can be caused by connecting a USB extension cable instead of plugging the USB directly into the TV
3. Not all USB devices are compatible.
Below is a list of recommended USB drives.
Models that are not listed may be compatible, but it is not guaranteed to work.
The USB support list are the same as Timeshift function,see the following pages for details.

9.Timeshift function

1.Prepare to record the program

This TV allows you to pause and record the currently watched digital program to a USB storage device, and to resume to the point where it was paused.



NOTE:

- Formatting a USB 2.0 storage device will be needed. Save your original data before formatting. All the data stored in the USB device will be erased after formatting.

USB Drive Storage Format

Select to format the USB device and allocate the amount of space for the Time Shift function.

NOTE:

- The format process will take at least 2 minutes. Please do not turn off the power or remove the USB device during formatting.

  During formatting, a speed test will be done on the USB device. If it fails, it means the USB device may not
- support the Time Shift function.

NOTE:

- Please do not unplug the USB storage device when the Time Shift function is activated.

  Approximately 4GB of memory buffers about offer 140 minutes.
-

Record a paused DTV program to USB storage device

1. While in the DTV input source, insert USB storage device to the USB port on the side of your TV.

2. Press PAUSE to start Time Shift function. The TV program paused. The Time Shift OSD appears, and starts recording.

29

3. Press STOP to stop Time Shift function and stop recording program.

28

Time Shift limitations:

1. When the Time Shift feature is activated, only the PLAY/PAUSE/STOP/FWD/REV/ VOL+/VOL-/MUTE keys and some basic operation keys (ENTER/EXIT/navigation keys) are available.

2. Video playback may not be smooth and skip if USB recording speed does not meet the minimum requirements .

3. Do Not remove USB disk or switch off the power during Time Shift operations. It will abort once the signal is lost.

4. Do Not remove the signal source during Time Shift operations.

5. Do Not quickly and repeatedly change operations between PLAY/PAUSE/FWD/REV.

6. Video may become pixelated when Video bit rate is too low.

7. Not all USB devices are compatible, The USB hard disk drive electricty should be < 500MA.
Below is a list of recommended USB drvies. Models that are not listed may be compatible, but it is not guaranteed to work.

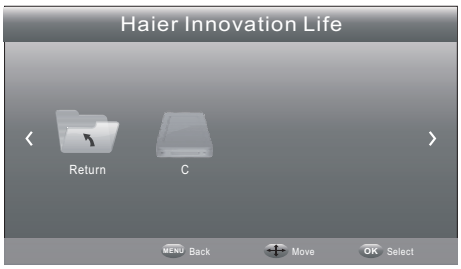
- SanDisk Extreme® Contour™ USB Flash Drive - 8GB SDCZ8-8192-E75
- SanDisk Extreme® Contour™ USB Flash Drive - 16GB SDCZ8-016G-A75
- Kingston DataTraveler 410 USB 2.0 Flash Drive - 8GB DT410/8GB
- Kingston DataTraveler 410 USB 2.0 Flash Drive - 16GB DT410/16GB
- OCZ Technology Rally2 USB 2.0 Flash Drive - 4GB OCZUSBR2DC-4GB
- OCZ Technology ATV USB 2.0 Flash Drive - 8GB OCZUSBATV-8GB
- OCZ Technology Rally2 USB 2.0 Flash Drive - 8GB OCZUSBR2DC-8GB
- SAMSUNG-HM500JI-500G

8. This feature is not available for all digital TV,such as scrambled or audio only channels.

10.USB Player

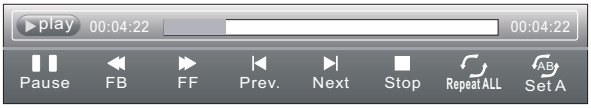
Press source key, and select USB in source list, press OK button to enter the USB menu.

Please make sure that the USB device have plugged in the slot.There are four type media item can be selected, such as photo, music, Movie, and text. Select the type media item by pressing ◀ ▶ , press **OK** button to enter the disk selection menu.



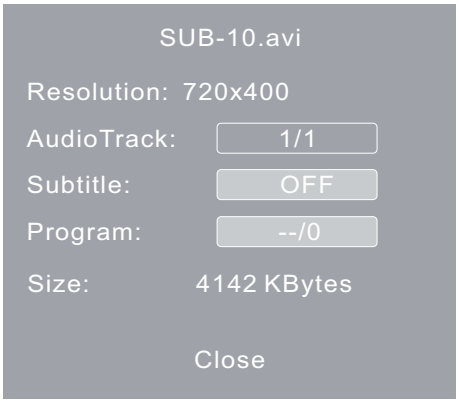
Press the ◀ ▶ to select the right disk and press **OK** to display media files and folder list or choose Return to back to the media type selection menu.

Select the media file by pressing ◀ ▶ or ▼▲ , then the preview frame will pop up.Press the button ▶ to play the media file in full screen.When the media file (photo, Movie, or text type) is playing, press the **OK** or Info button can display the control bar.



Press ◀ ▶ to select the function icon, press OK button to confirm the function.
Press ▼ or EXIT button to exit the control bar except for music.

NOTE:
You can adjust the audio track, or program in the Info menu while Playing the video file.Choose the Info icon and press OK can display the Info MENU.

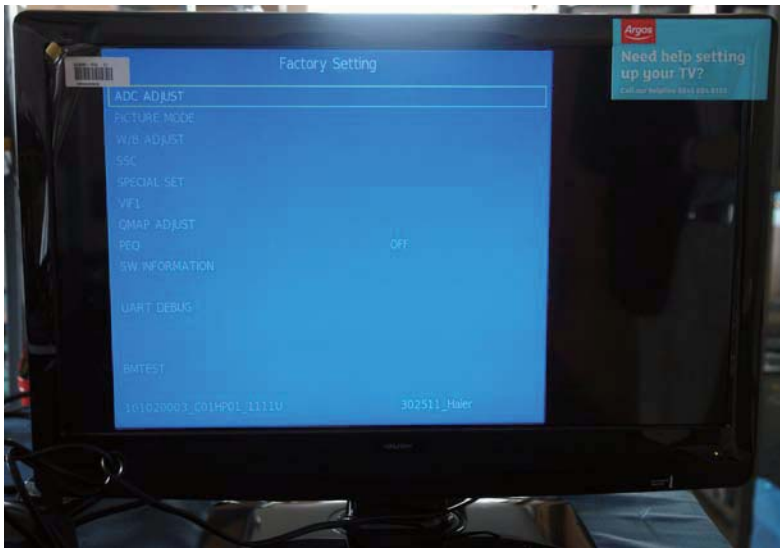


USB playback is supported for the following photo file formats:
-JPEG(JPEG format, files with the extension ".jpg")
-BMP (files with the extension ".bmp")
-PNG (files with the extension ".png")
USB playback is supported for the following music file formats:
-MP3 (files with the extension ".mp3")
-WAV (files with the extension ".wav")
USB playback is supported for the following text file formats:
-TXT (files with the extension ".txt")

USB playback is supported for the following movie file formats:
-AVI (file with the extension".avi")
-TS (MPEG2 & H.264)

8.1 How to enter into the factory model

1. You can press "source-2-5-8-0" to go into factory setting. Presse the key "exit" to shut the factory setting.



content:

1: ADC setup: set ADC value of YUV,VGA. It can also be auto-set. Adopt 100% color bar to yuv and Checkerboard signal to vga.

2:Adjust the brightness and contrast ratio of each signal, which do not affect the value of user's menu.

3: adjust the color temperature and white balance of each signal source.

4: SSC to adjust the spectrum for passing the EMC test.

5:special set

1)2hour off-- for Aging test

2)WDT --watch dog

3)white pattern --set pure color output for the panel, used at the checking and aging test for panel.

4)reset

5)set the recorder

6)set power-on screen display.

6:QMAP adjust :adjust color quality.

7:PEQ set sound EQ

8:sw information: to check the sofeware information

9:UART DEBUG : Access to serial port and connect a computer if set to HK.

10:BMTEST :cpu check the CPU

The last line is SW Ver.No

8.2 How to update software

Haier MSD308 F/W upgrade with USB SOP

Step 1: Ready for F/W Upgrade

1.1 Prepare a USB memory .

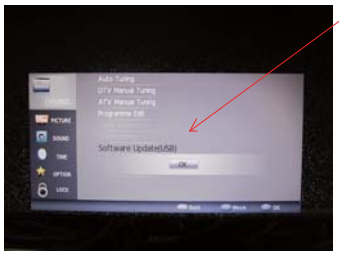
1.2 Copy the software le (merg.bin) from your computer to the USB memory, and remove it from computer's USB port!

Step 2: F/W Upgrade

2.1 AC ON

2.2,then input USB , press "MENU" and choose "update software", and then press "OK".

2.3,Now you should choose "Yes",TV begin to update.You should reset TV after update.



Note: When Upgrade on the process, please don't Power-Off!

8.3 How to enter into the hotel model

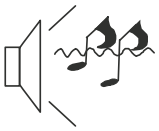
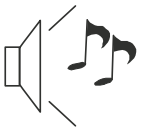
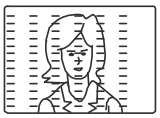
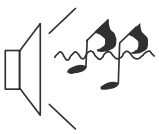
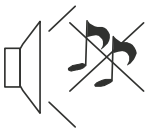
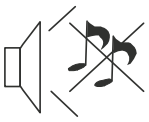
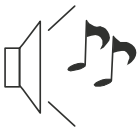
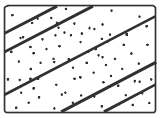
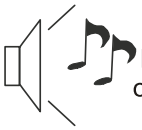
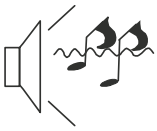
1. You can press "source-1-0-0-1" to go into the hotel model. Presse the key "exit" to shut the hotel model.

Content:

1.Hotel Mode: Hotel mode switch
2.Panel Key Lock: Panel key lock
3.Max Volume: Hotel mode can adjust the maximum volume
4.Start Source: Hotel mode locking TV signal source
5.Start Channel: Hotel mode locking program channels
6.Start Menu Display: Hotel Mode menu is displayed
7.Input Source Change: Hotel mode is to display the Source
8.Save to USB: TV related equipment will be copied to the system, U disk , to other machines used for cloning
9.Loaking: U disk data will be cloned into the machine
10.Volume Default

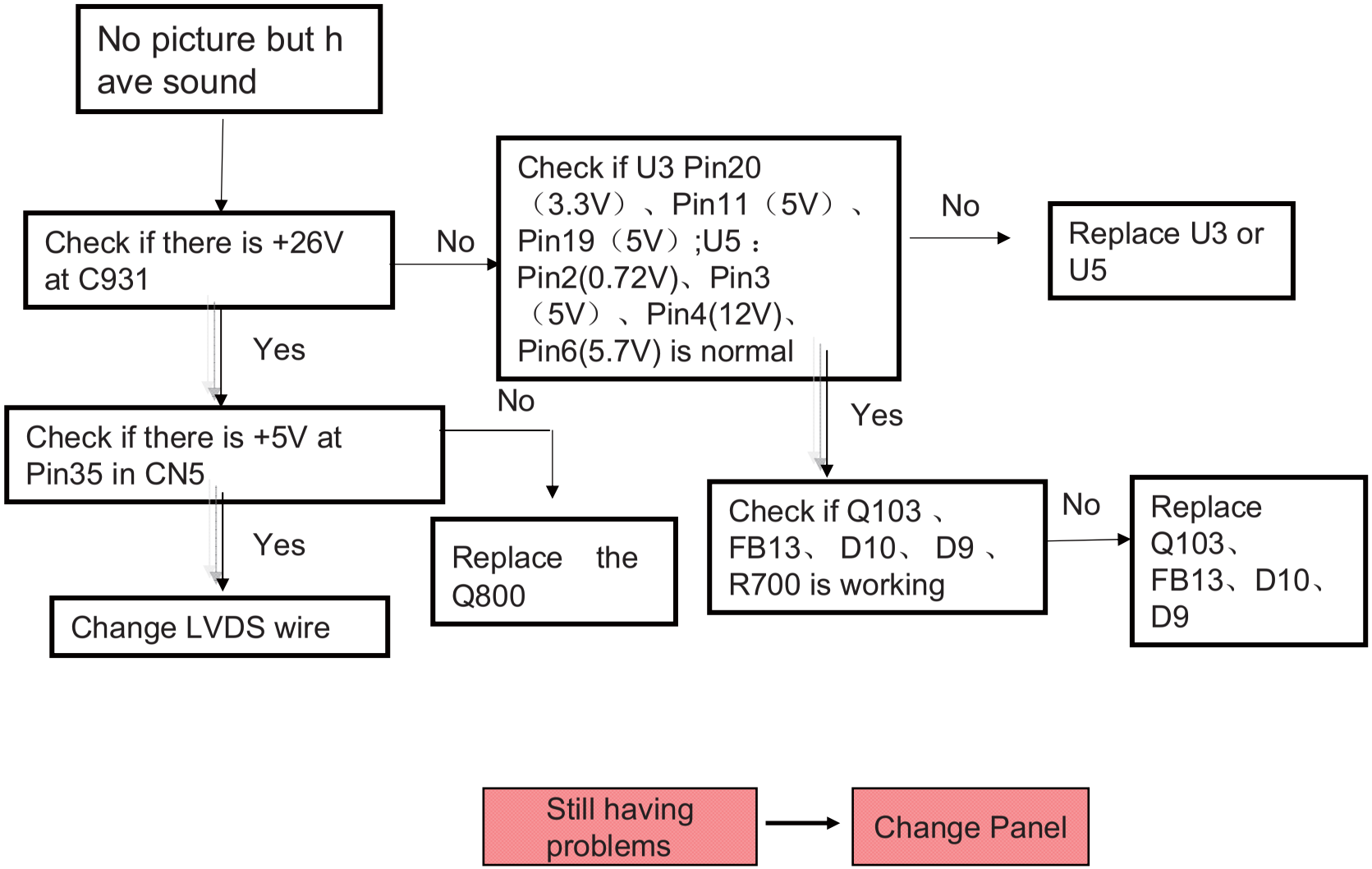
9. Trouble shooting

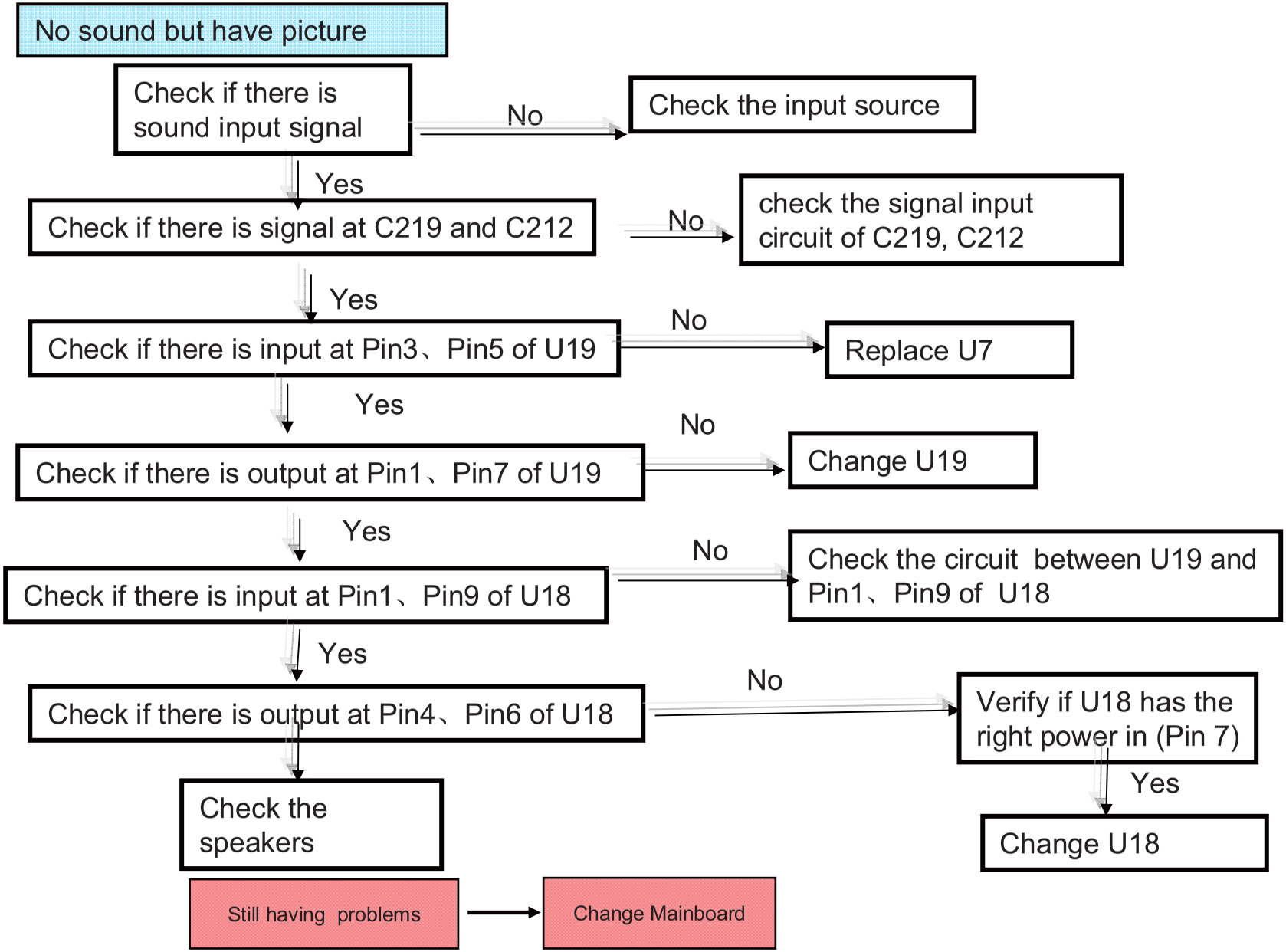
9-1. Simple check

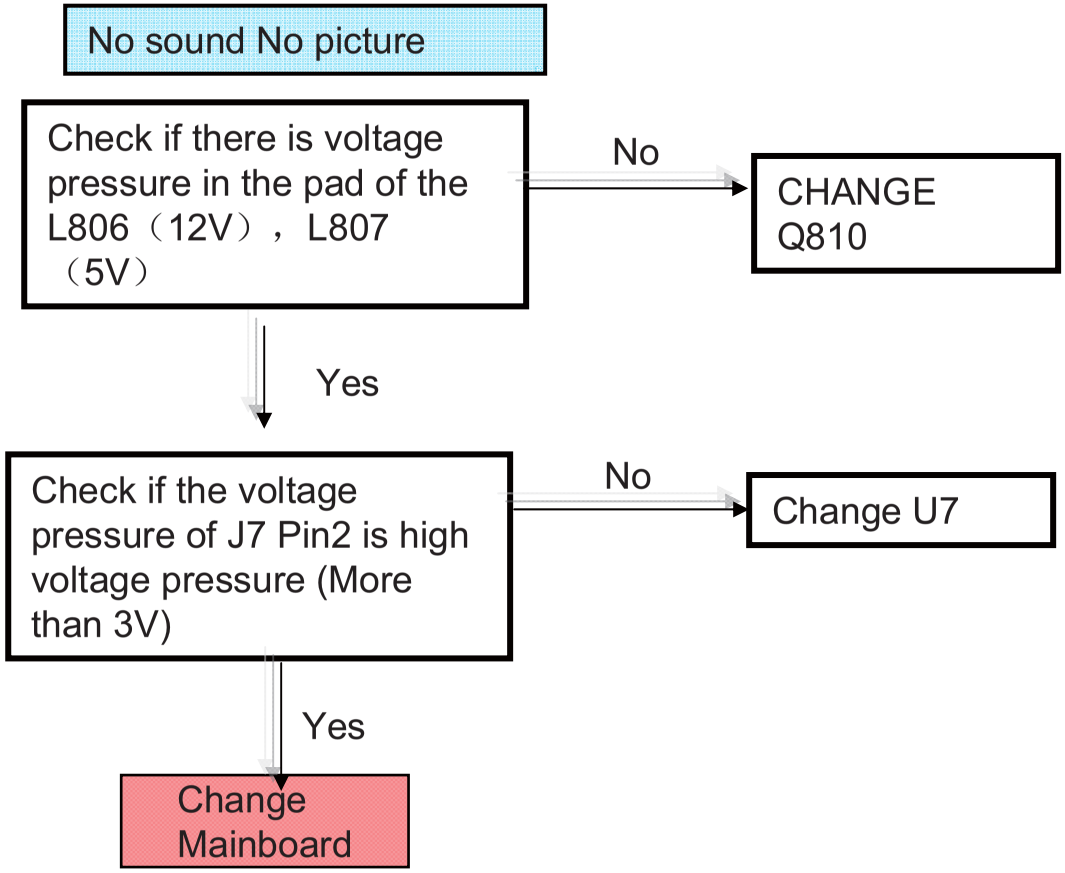
Trouble phenomenon		Inspection
Picture	Audio	
Snow	 Noise	antenna position, direction or connection
Ghost	 Normal audio	antenna position, direction or connection
 Interfere	 Noise	electronic equipment,car/ motorcycle,fluorescent light
Normal Picture	 Mute	Volume(inspect wether the mute function on the remote control are started , or audio system are correct or not)
No picture	 Mute	Power cord is not inserted Power switch is not opened Contrast and brightness/volume setup Press standby key on the remote control for inspecting
No color	 Normal audio	color control
 Scramble	 Normal audio or weak	retune channel
No color	 Noise	Audio system

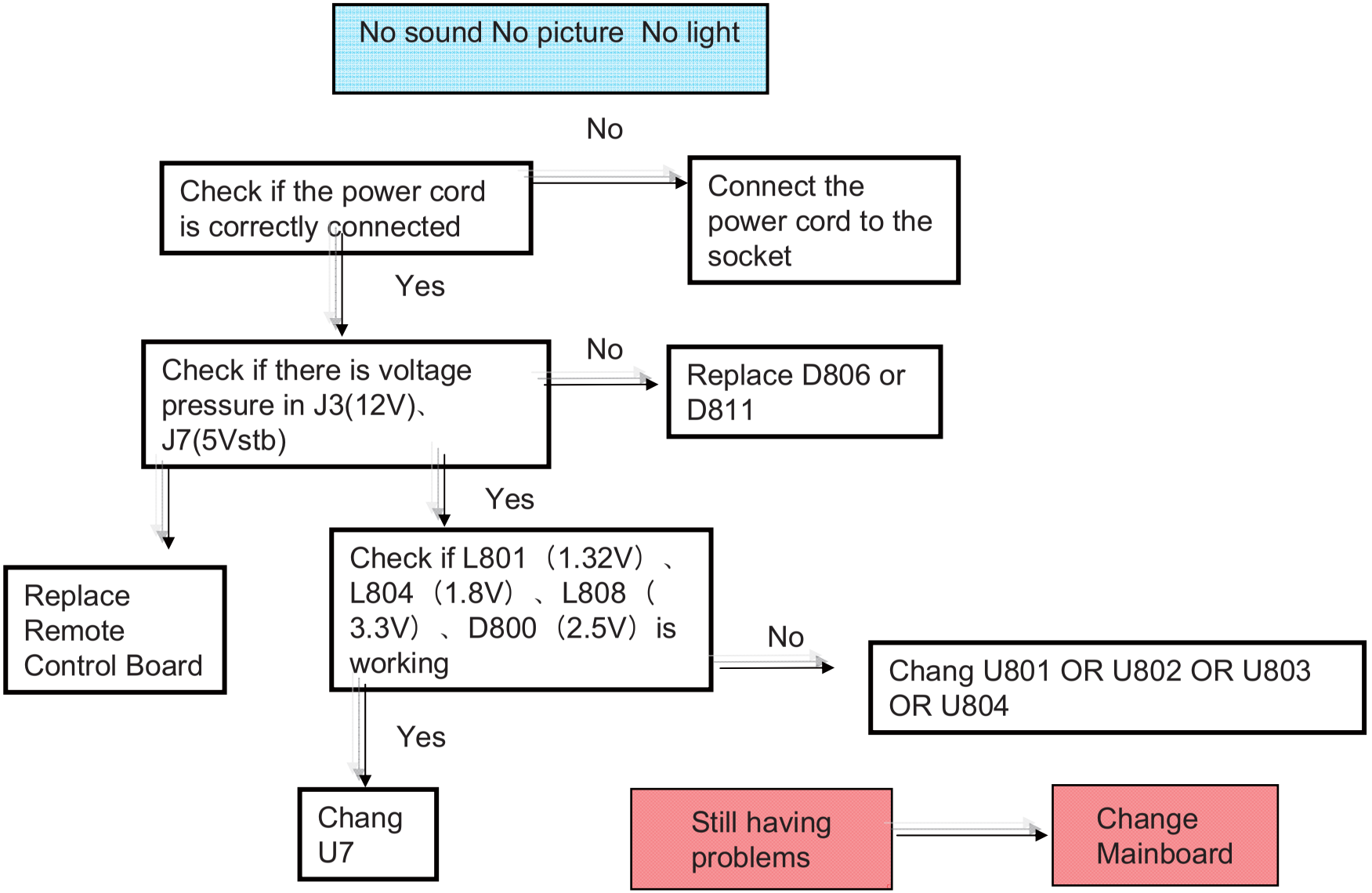
Special Explanation：The accessories such as remote control is not belongs to the guarantee。

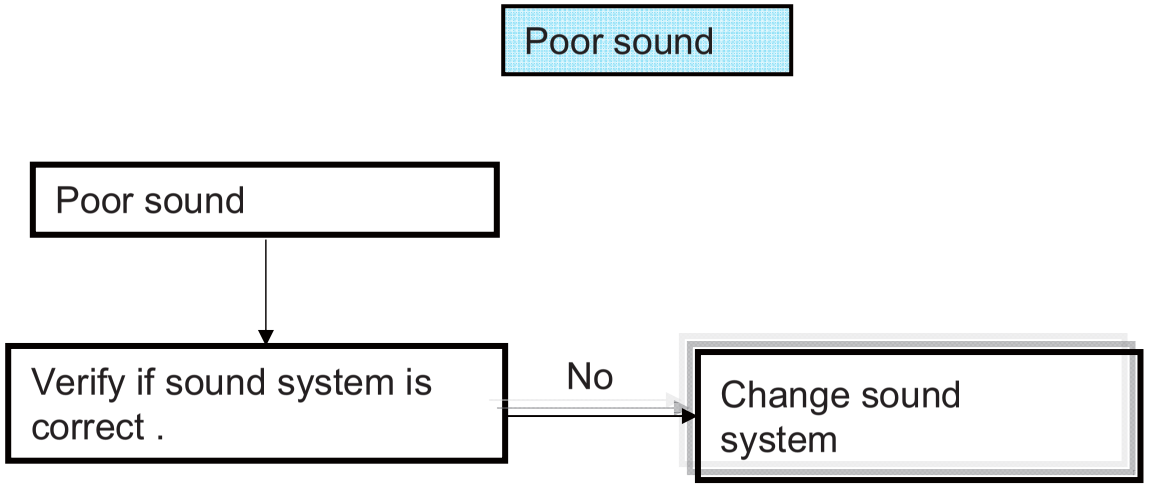
9-2. Main board failure check



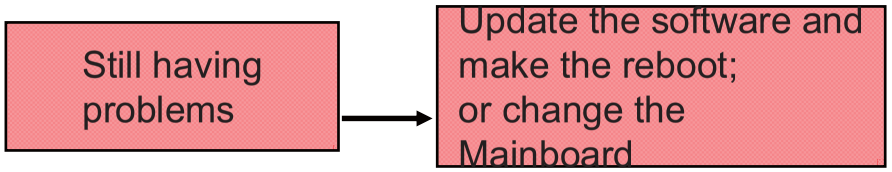

No sound but have picture
Check if there is sound input signal
No
Check the input source
Yes
Check if there is signal at C219 and C212
No
check the signal input circuit of C219, C212
Yes
Check if there is input at Pin3、Pin5 of U19
No
Replace U7
Yes
Check if there is output at Pin1、Pin7 of U19
No
Change U19
Yes
Check if there is input at Pin1、Pin9 of U18
No
Check the circuit between U19 and Pin1、Pin9 of U18
Yes
Check if there is output at Pin4、Pin6 of U18
No
Verify if U18 has the right power in (Pin 7)
Yes
Change U18
Check the speakers
Still having problems
Change Mainboard

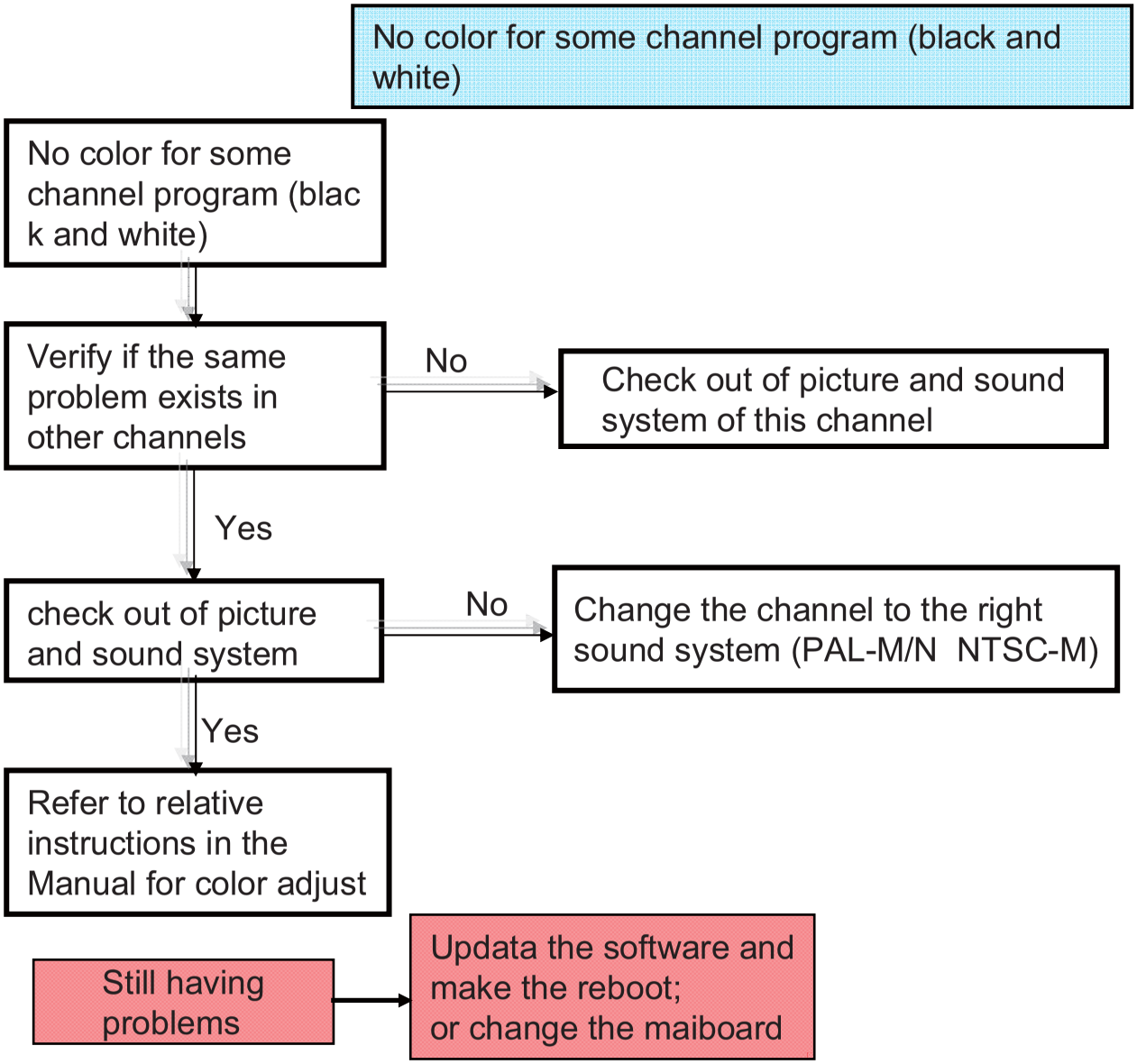

No sound No picture
Check if there is voltage pressure in the pad of the L806（12V），L807（5V）
No
CHANGE Q810
Yes
Check if the voltage pressure of J7 Pin2 is high voltage pressure (More than 3V)
No
Change U7
Yes
Change Mainboard

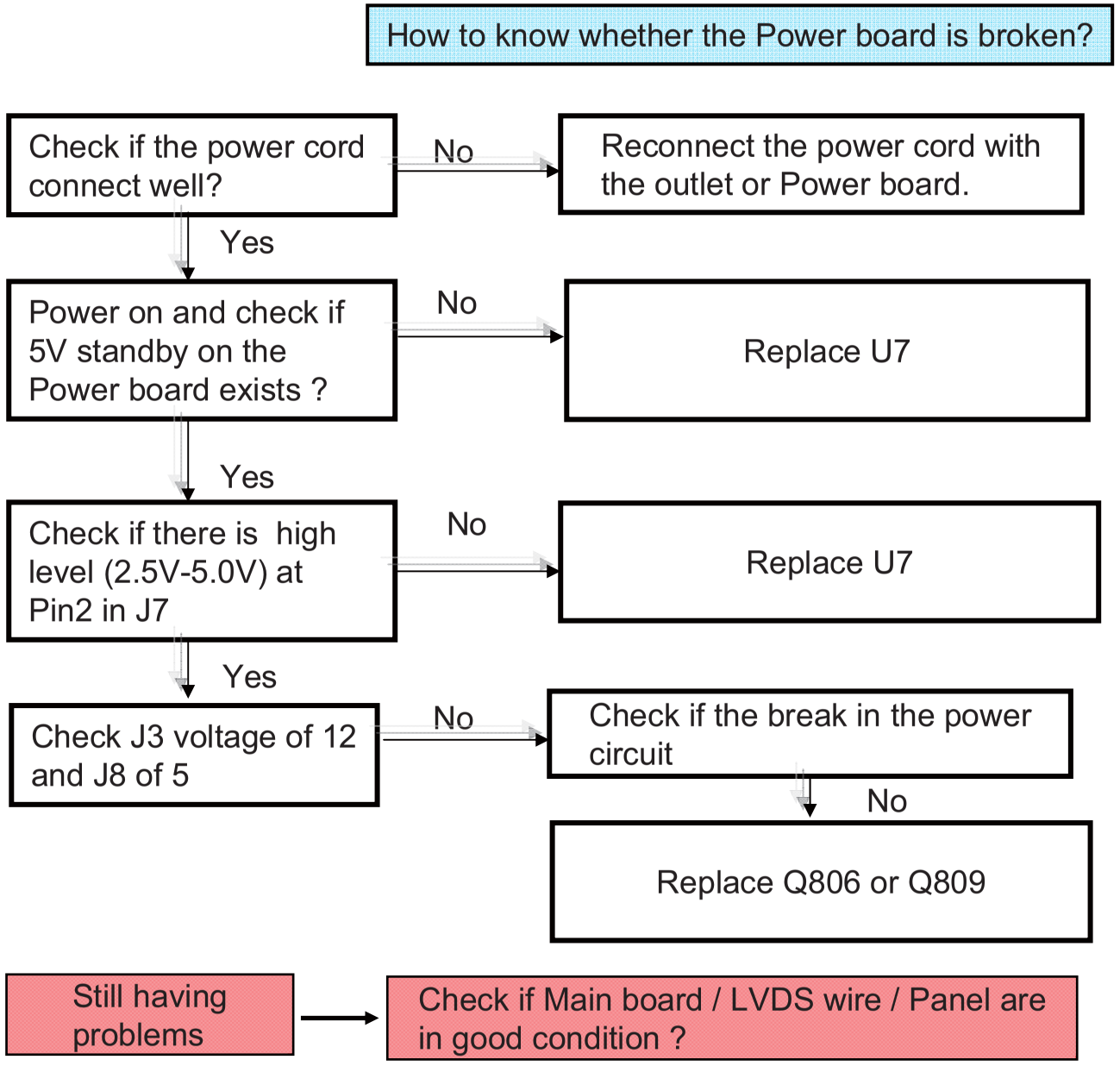

No sound No picture No light
No
Check if the power cord is correctly connected
Connect the power cord to the socket
Yes
Check if there is voltage pressure in J3(12V)、J7(5Vstb)
No
Replace D806 or D811
Yes
Replace Remote Control Board
Check if L801（1.32V）、L804（1.8V）、L808（3.3V）、D800（2.5V）is working
No
Chang U801 OR U802 OR U803 OR U804
Yes
Chang U7
Still having problems
Change Mainboard

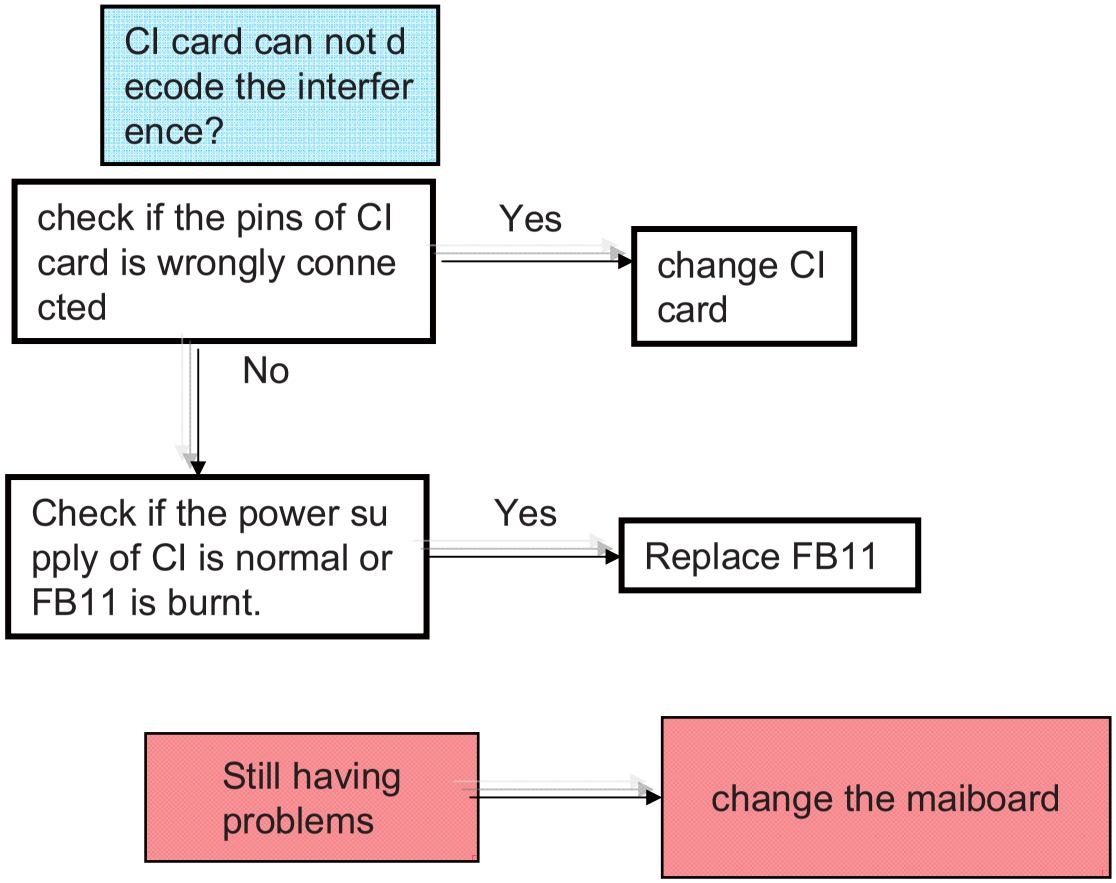


For ease of use, recommend that customer format the picture and sound settings in the automatic option.




No color for some channel program (black and white)
No color for some channel program (blac k and white)
Verify if the same problem exists in other channels
No
Check out of picture and sound system of this channel
Yes
check out of picture and sound system
No
Change the channel to the right sound system (PAL-M/N NTSC-M)
Yes
Refer to relative instructions in the Manual for color adjust
Still having problems
Updata the software and make the reboot;
or change the maiboard


How to know whether the Power board is broken?
Check if the power cord connect well?
No
Reconnect the power cord with the outlet or Power board.
Yes
Power on and check if 5V standby on the Power board exists ?
No
Replace U7
Yes
Check if there is high level (2.5V-5.0V) at Pin2 in J7
No
Replace U7
Yes
Check J3 voltage of 12 and J8 of 5
No
Check if the break in the power circuit
No
Replace Q806 or Q809
Still having problems
Check if Main board / LVDS wire / Panel are in good condition ?


CI card can not d ecode the interfer ence?
check if the pins of CI card is wrongly conne cted
Yes
change CI card
No
Check if the power su pply of CI is normal or FB11 is burnt.
Yes
Replace FB11
Still having problems
change the maiboard

- Mainboard not work
- 1. check if the power supply have 12V and 5V output
- 2.Verify if the DC/DC convertors have the right output (5V,3.3V,2.5V,1.8V,1.32V)
- 3.Verify if the Mainchip(MSD308), DDR, AudioAMP…solder well;
- 4.Verify if the FLASH(U8) has the right software and work well;
- 5.Verify if the Y1(Crystal) has the right frequency

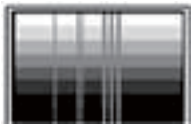
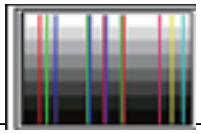
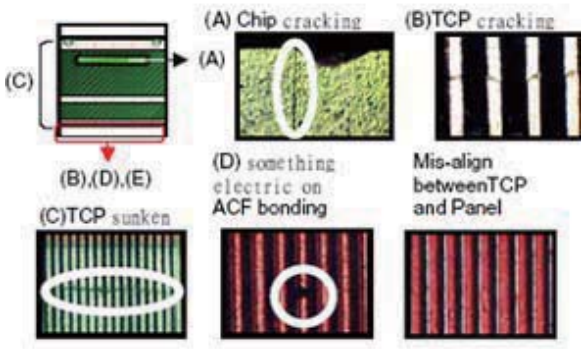
- Panel not work
- 1. check if the voltage input and output of boost IC is working normally.
- 2.Verify if the Mainboard output the right On/Off signal to power board;
- 3.Verify if the Mainboard output the LVDS singal to panel T-con board
- 4.Verify if the software is the right version of this model.
- 5.Change the LVDS wire to check if it's broken.

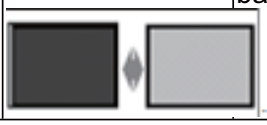
Power board not work

- 1.Verify if the power cord connect well?
- 2.check if the power supply if working normally ; check if the power supply of +5Vstandby is working normally;
- 3. check if the POWER ON/OFF voltage is high pressure;
- 4.check if the power supply have +12V/+5V output;
- Check if Main board / LVDS wire / Panel are in good condition ?

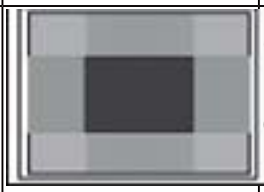
9-3. Pannel failure

Failure Mode

Part	Name	Description	Phenomena	Failure cause
TCP	V B/D	Vertical bar		Block Defect :TCP cracking or cracking Dim or L/D :TCP Sunken :TCP lead cracking :ACF bonding short :Awful environment and something electric enter into LCD :Mis-align between TCP and Panel :Panel failure :TCP failure
	V Dim	Vertal gray line		
	V L/D	Vertical color line(light or dark forever)		
	H B/D	Horizontal bar		
	H Dim	Horizontal gary line		
	H L/D	Horizontal line(light or dark forever)		

Part	Name	Description	Phenomena	Failure cause
Panel or Polarlzer	Dot Defect	Bright dot dark dot in pannel		Incoming Inspection Standard
	Polarizer Bubble	Bladder in Polarizer		Bladder between Polarizer and top glass
	Polarizer Scratch	Polarizer Scratch		Tine or rigidity arose
	F/M inside Polarizer	Eyewinker inside Polarizer		Eyewinker inside Polarizer
Circuit	Abnormal Display	Abnormal Display		1.Chip lose action 2.IC ahort or jointiog bad 3.Pannel and vsc connect bad
	Flashing	Bright and dark display alternately		

Failure Mode

Part	Name	Description	Phenomena	Failure cause
Circuit	White Screen	B/L normal, only white screen display		Maybe caused by surge current and EDS
	Black Screen	B/L normal, only Black screen display		
	FIIcker	Crosstalk		LCD Vcom imbalance
	Abnormal Color	Only color abormal		Capacitance improper bring crosstalk inside LCD pannel
	Abnormal Color	Only color abnormal		1.Chip lose action 2.IC short or jointion bad 3.Pannel and vsc connect bad

Failure Mode

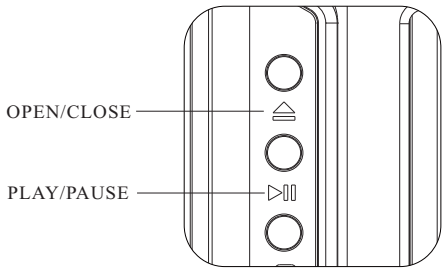
Part	Name	Description	Phenomena	Failure cause
	Mechanlcal Nolse	When turn panel,appear cacophony		Caused by Mechanica noise of backlight unit
	Ripple	Connectric circle		Causeed by between mechanism and pannel
	B/L off	B/L lose action		*Connect badness between wire and electrode
	B/L dark	B/L brightness darker than normal		*Connect badnessShort between wire and electrode
	B/L wire damaged	B/L wire damaged		Operation abnormal or systemic noise
	B/L wire open	Without backlight		Operation abnormal or systemic noise
	B/L shut down	B/L shutdown in sometime		Short bitween lamp housing and wire, Because consume power too much
	F/M	F/M inB/L ,white,balck Rotundity or wirelike		F/M in B/L unit

Failure Mode

Part	Name	Description	Phenomena	Failure cause
Mechanlcal or B/L	Light leakage	Brightness at bottom of LCM brighter than normal		B/L unit badness
	Uniformity	B/L brightness asymmetric		Sheet in B/L unit is uneven
	Mount hole	Lack screw or screw damage		*Lack screw Screw damage

10. DVD OPERATION

DVD SIDE PANEL



Caution

This DVD Player has a Class 1 laser which may be harmful to your eyes. Do not attempt to disassemble the cabinet or make any adjustments.
Refer all servicing to a qualified professional.

Features

Disc formats supported by this player:

MPEG4 files on discs

Multi-angle

Dolby Digital

Subtitle choices

KODAK picture CD

Audio choices

MP3 files on CD-R/CD-RW

TV Aspect Ratio modes

DVD video

Parental Lock

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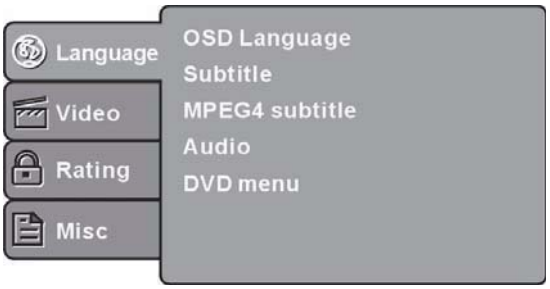
DVD OPERATION

MENU OPERATION

Press the SETUP button on the remote control, the SETUP MENU will be displayed. After accessing the setup menu, press the direction buttons for up and down movement to select an item desired, and press RIGHT direction button to select the lower item. Then press the OK button to confirm. Press LEFT direction button return to the menu of upper level. To exit the setup, press the SETUP button again. In the SETUP MENU, you may choose any of the following options as you like.

LANGUAGE SETUP

Select Language in the setup menu, and display the Language submenu:



OSD Language
Use this item to select the language of the setup menu and screen display.

Subtitle
This option provides the preset subtitle language.

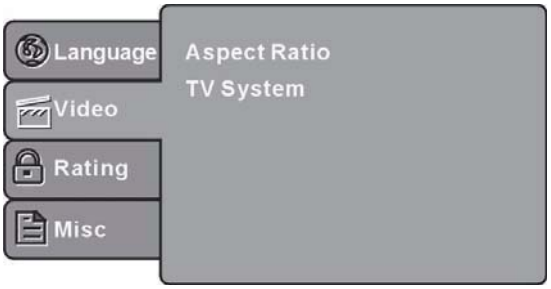
MPEG4 Subtitle(optional)
Select different MPEG4 subtitle encoding option.
Note: *Not all players support this item.*

Audio
Select the built-in disc dubbing language options.

DVD Menu
This option provides the film's menu language options.

VIDEO SETUP

Select **Video** in the setup menu, and display the **Video** submenu:



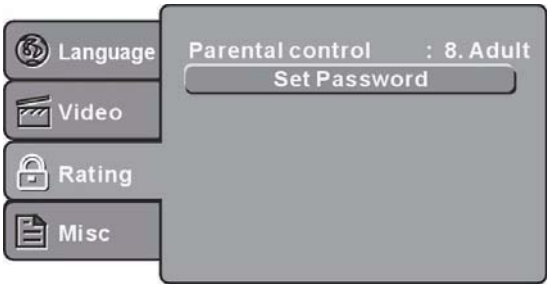
SYSTEM SETUP

Aspect Ratio
Select the aspect ratio.
Notes:
The image display ratio is related to the recorded disc format. Some disc can not display images in the aspect ratio you choose. If you play a disc recorded in 4:3 format on a wide screen TV, black bars will appear on the left and right side of the screen. You must adjust the screen setting depending on the type of the television you have.

TV System
Select the different TV system.
Note: The DVD player setting should be matched to your TV set.For more information of output format, refer to the instructions or your TV set.

RATING SETUP

Select **Rating** in the setup menu, and display the Rating submenu:

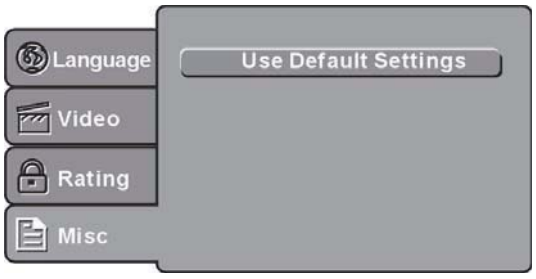


Parental Control
Set the parental control feature of the player
Note: *Password is needed before setting Parental Control.*

Set Password
Input four digits (password), then press **ENTER**to confirm.
Note*: If you forget your password, please use the universal password 6666 to unlock.*

MISC SETUP

Select **MISC** in the setup menu, and display the submenu:



Use Default Settings
Reset setup data to factory default value.

DVD OPERATION

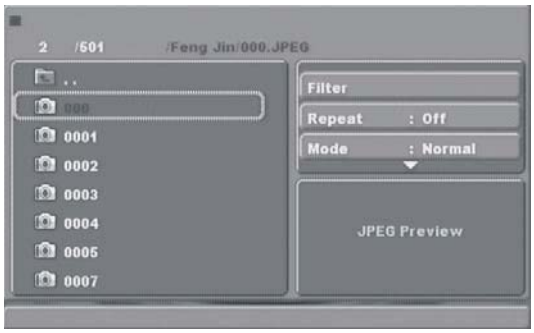
MP3/WMA/JPEG/MPEG4 PLAYBACK

The MP3/WMA/MPEG4 disc has such a directory structure as shown picture above.
Press **Direction key** to choose the root directory and then press OK button to enter into the sub directory. Press **Direction key** to choose the desired track and then press**OK** or **PLAY** to enjoy the music or movie. If you want to return to the upper menu, press **Direction key** to choose the icon and press**OK** button.

Filter: Allows selecting the categories of files displayed in the browser list.
Repeat: To switch different repeat playing mode
Mode: Select different playing mode as follows:
Normal: Shuffle mode is cancelled.
Shuffle: Shuffle mode enabled. When playback reaches the end of the currentchapter/track, playback jumps to a random chapter/track. As the end of each chapter/track is reached, another random chapter/track will be played until all tracks/chapters have been played or the Shuffle mode is cancelled by toggling to a different Mode Option.
Edit Mode: This option allows you to edit the directory and files and tracks displayed. Use the Cursor Buttons to select tracks or files you wish to edit and press the Enter/OK Button. when the Edit Mode button is pressed.To exit the Edit Mode or cancel press the Edit Mode button again.
Program View: This option allows you to display the track or file directly.
Browser View: This option allows you to display track directory.
Add to Program: This option allows you to create your own playlist in the track directory.
Clear program: This option allows you to clear any playlists you have created.

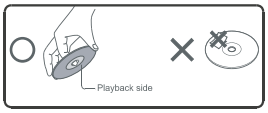
PICTURE CD PLAYBACK

The PICTURE CD disc has such a directory structure structure as shown in the following picture.



Press **Direction key** to choose the root directory and then press OK button to enter into the sub directory. Press **Direction key** to choose the desired picture and then press **OK** or **PLAY** to enjoy the picture. If you want to return to the upper menu, press **Direction key** to choose the icon and press **OK** button.
Image rotation
In picture play state, press **Direction key** to rotate the picture.

Protect your DVD discs



HANDLE DISCS PROPERLY

" Do not touch the playback side of the disc.

" Do not attach paper or tape to the disc.

HOW TO CLEAN A DISC
Fingerprints and dust on the disc can cause poor picture and sound quality and may prevent the disc from playing altogether.
Always wipe the disc with a soft, dust free cloth from the centre outwards. Never use any paper tissues as these will scratch the disc.
If you cannot wipe off the dust with a dust free soft cloth, wipe the disc lightly with a slightly moistened soft dust free cloth.
Do not use any type of solvent such as thinners, any oil based cleaners, antistatic spray for vinyl LP's or commercially available cleaners unless specifically made for cleaning CD and DVD discs. The wrong type of cleaning may damage the disc.

11.DVD Trouble shotting

If you have any questions, please consult the troubleshooting guide below:

NO PICTURE OR SOUND

- Ensure the power button is on.
- Ensure the power outlet is operational.
- Ensure the power cord is not damaged.
- Ensure the power plug is connected firmly to the outlet.

PICTURE BUT NO SOUND

- Ensure the audio is not set to mute.
- Ensure you have set the player s AUDIO settings correctly.

POOR PICTURE OR SOUND

- Ensure you have set the player s AUDIO settings correctly
- Ensure the disc is not scratched or stained.

"BAD DISC" DISPLAYED

- Ensure the disc is not warped, damaged or deformed.
- Ensure the disc is not badly stained or damaged.
- Ensure the disc format is compatible with the player.
- Please check whether you have tried to play a software CD. If so, please restart the player.

REMOTE NOT WORKING

- Make sure the Main unit s POWER button is on
- Ensure the remote batteries are working.
- Point the remote control directly at the player s IRsensor.
- Remove any obstacles between the remote and theIR sensor.

UNIT NOT WORKING

- Turn off the power, and then turn it on again.

"NO DISC" DISPLAYED

- Ensure you have put a CD or DVD in the slot.
- Ensure the disc is the right way round. The label should be away from you when looking at the TV screen.
- Ensure the disc is not distorted, bent, covered in finger marks or badly scratched.

Sincere Forever

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Printed in China